



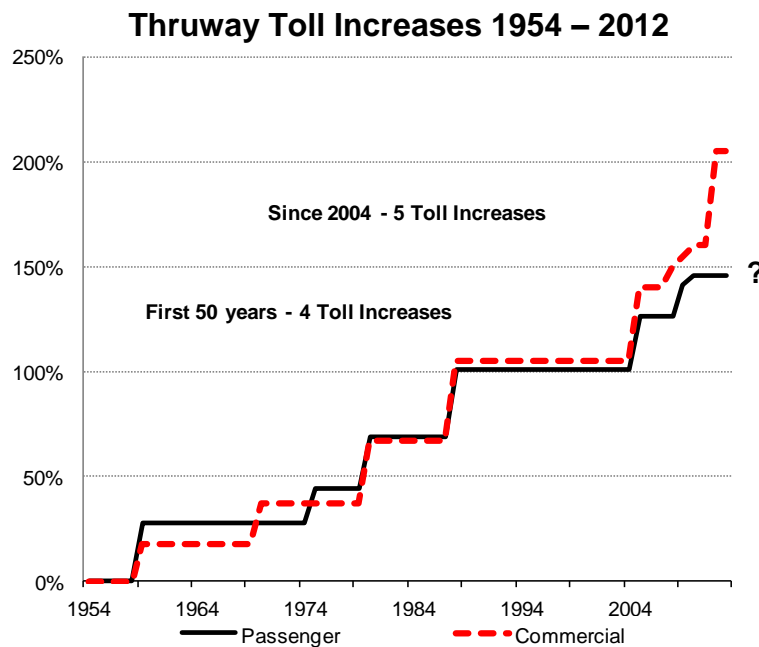
OFFICE OF THE STATE COMPTROLLER
Thomas P. DiNapoli, State Comptroller

**Assessment of the Thruway Authority's
Finances and Proposed Toll Increase**

August 2012

Summary

In late May 2012, the New York State Thruway Authority announced that it was beginning the process of imposing a 45 percent average toll increase for larger commercial vehicles. This increase, intended to take effect on September 30, 2012, comes after the Thruway Authority has increased tolls for all classes of vehicles in 2005, 2008, 2009 and 2010. The proposed increase would mark the fifth time in the past seven years that the Thruway Authority has imposed higher tolls. A consultant report on the Authority's financial requirements, commissioned by the Authority, has suggested that "further actions" may be needed by 2015 – raising the prospect of still another toll increase, potentially affecting a broader group of Thruway users than the current targeted proposal.¹



¹ Unless otherwise indicated, all figures in this report are based on New York State Thruway Authority annual budgets, Jacobs Engineering Group, *New York State Thruway Authority Financial Requirements and Proposed Toll Adjustments 2012-2016*, May 2012, Jacobs Civil Consultants, Inc. *Traffic and Revenue Report Including Review of Operating Expenses and Physical Condition*, June 18, 2012, Navigant Capital Advisors, *New York State Thruway Authority Executive Summary Report*, May 24, 2012.

An independent financial and management review, commissioned by the Authority, concluded that historically the Authority has “failed to demonstrate fiscal responsibility” and resorted to “kick-the-can” policies that postponed payment of current costs and deferred difficult decisions to the future. Numerous audits by the Office of the State Comptroller over the past decade have identified specific examples of missed opportunities to limit costs and to generate new revenues without raising tolls.

Additional factors in the Thruway Authority’s current weakened condition include the Authority’s responsibility for financing and operating the State’s Canal System as a result of legislation enacted two decades ago. The Canal System has consumed more than \$1.1 billion of Thruway resources in the ensuing period. Contrary to the original legislative intent, responsibility for supporting the canals has diminished the Authority’s ability to pursue its core mission. Moving the Canal System into the Thruway Authority was intended, in part, to stimulate tourism and economic development along the historic canal corridors. This goal, too, has been elusive; boating activity on the canal has declined substantially under Thruway control.

In recent months, the Thruway Authority has made clear its intent to achieve significant cost savings and to improve its capital planning – both laudable goals. However, the Authority’s public statements regarding target amounts for cost savings have varied substantially, and no specific plan for achieving desired efficiencies has been made public. A definitive assessment regarding the need for any toll increase and its potential scope can only be established if and when the Authority provides additional information on budgetary actions it considers achievable in 2012 and the years immediately following.

The proposed 45 percent average toll increase for commercial vehicles would unavoidably have a negative impact on commercial trucking companies and truck drivers operating in New York State, sending ripple effects through the State’s overall economy. Those directly affected are likely to pass most or all of the increase on to consumers. Recent news reports indicate that substantial toll increases are also being considered for all vehicles on the new Tappan Zee Bridge, planned for construction over the next several years.

The combination of higher charges for commercial trucking companies and truck drivers using the Thruway, coupled with a potential sharp increase in the Tappan Zee Bridge toll, will have impacts that are difficult to predict. Clearly, if the Thruway proceeds with its planned 45 percent average increase, some truck drivers will seek alternate routes. To the extent that such alternatives include out-of-state highways, businesses in New York that serve long-distance carriers will lose revenue and may reduce employment as a result. Where trucking activity remains in New York but moves to non-tolled routes, taxpayers will pick up incremental costs for repairs to State and local highways that experience more rapid deterioration due to an increase in heavy traffic.

This report provides an assessment of the Thruway Authority’s financial condition in order to inform the public discussion related to the proposed toll increase. It identifies areas of fiscal stress, such as increasing debt service costs and overly optimistic traffic estimates in past years, and highlights areas of weakness and concern identified in audits by the

Office of the State Comptroller as well as independent consultant reports. It concludes with a series of recommendations that the Authority should consider before acting on additional toll increases.

Thruway Authority's Current Financial Condition

Thruway revenues have not kept pace with expenses in recent years. Thruway-generated revenues consist of passenger and commercial tolls, plaza rental payments, and a variety of other receipts. (Thruway-generated resources do not include federal aid or bond proceeds; other resources, such as fund balances and reserves, may also be available.) From 2002 through 2011, Thruway-generated revenues grew by 4.0 percent on average annually, while expenses grew by 5.0 percent on average. In the most recent year, 2011, Thruway-generated revenue fell by 1.0 percent while expenses rose 7.0 percent.

Thruway Authority Revenues and Expenses, 2002-2011
(in millions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
SOURCES										
Passenger Revenue	253.9	257.2	264.8	311.1	333.7	324.7	347.1	400.8	413.1	403.9
Commercial Revenue	169.5	170.0	174.8	200.1	220.7	215.6	215.6	210.8	228.1	230.2
Other Revenue	26.5	27.4	30.4	36.4	39.6	41.4	33.5	26.7	31.3	31.4
Total Thruway Revenue	449.9	454.6	470.0	547.6	594.0	581.7	596.2	638.3	672.5	665.5
Year-to-Year Revenue Growth	1.8%	1.0%	3.4%	16.5%	8.5%	-2.1%	2.5%	7.1%	5.4%	-1.0%
Bond proceeds*	N/A	N/A	N/A	60.4	154.8	198.3	299.5	258.4	305.8	366.0
Federal Aid	32.7	44.0	70.6	43.1	22.7	30.9	17.6	10.0	8.7	0.0
USES										
Thruway	278.4	284.3	310.7	319.8	335.2	349.3	337.3	346.7	364.2	370.0
Canal System	31.9	30.7	6.3	38.2	42.8	45.9	45.2	48.7	46.0	51.3
Total Operating Expenses	310.3	315.0	317.0	358.0	378.0	395.2	382.5	395.4	410.2	421.3
Thruway Capital	195.6	195.7	173.6	124.4	230.2	326.3	324.9	295.0	350.9	417.1
Canal System Capital	38.4	33.3	15.0	21.0	14.4	44.2	30.3	26.1	26.8	27.4
Total Capital Expenses	234.0	229.0	188.6	145.4	244.6	370.5	355.2	321.1	377.7	444.5
Debt Service	93.2	94.0	92.7	108.4	128.5	135.8	163.5	176.9	191.2	181.8
Total Expenses	637.5	638.0	598.3	611.8	751.1	901.5	901.2	893.4	979.1	1,047.6
Year-to-Year Spending Growth	-0.5%	0.1%	-6.2%	2.3%	22.8%	20.0%	0.0%	-0.9%	9.6%	7.0%

* N/A = no reported bond proceed information for the years 2002-2004.

Source: Thruway Authority submissions pursuant to Public Authority Law Section 2804.

Revenue – Passenger and commercial tolls account for about 95 percent of Thruway-generated revenues, with the remainder coming from concession payments and interest earnings on Thruway funds. Over the five-year period between 1997 and 2002, revenue grew by 3.4 percent annually on average. In the next five-year period, including the toll increase adopted in 2005, Thruway revenue grew by 5.2 percent annually on average.

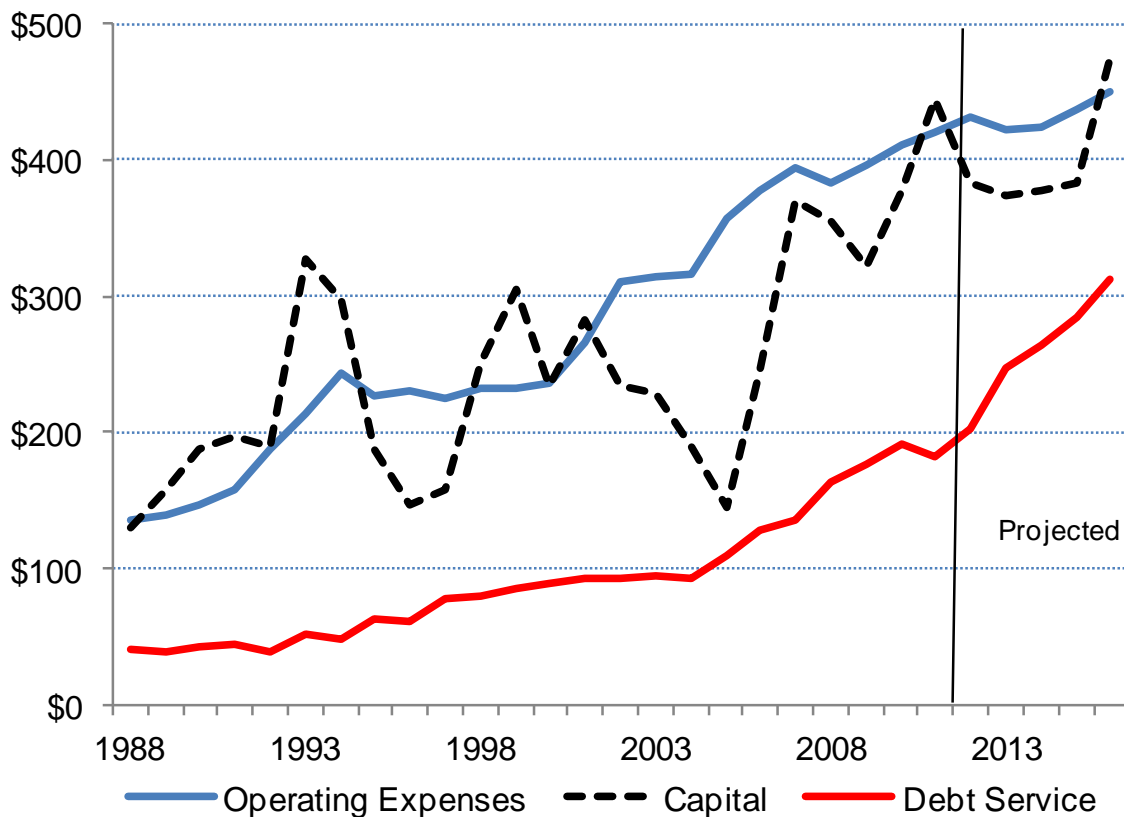
Following the toll increases beginning in 2008, Thruway-generated revenue has grown by 3.4 percent annually on average.

The Thruway Authority is currently planning to increase tolls for commercial users (excluding two-axle trucks) by an average of 45 percent. The Authority has described the increase, which would generate an estimated \$371 million in new revenue from October 2012 through 2016, as “modest.”

The difference between Thruway-generated revenues and expenses is made up principally with federal aid and bond proceeds. Federal aid has dropped sharply in recent years, falling to zero in 2011. During the period from 2002 through 2007, federal aid averaged \$40.7 million a year.

Expenses – Thruway spending falls into three broad categories: operational expenses, capital (infrastructure) spending, and debt service on Thruway bonds.

Thruway Expenses 1988 – 2016
(millions of dollars)



Source: Thruway Authority

Operating expenses – The Authority’s operating expenses include costs related to the day-to-day operation of the Thruway and the Canal System. Over the past ten years, annual Thruway Authority spending has grown 35.8 percent, increasing from \$310.3 million in 2002 to \$421.3 million in 2011. The cumulative ten-year cost was \$3.7 billion. Thruway operations, which comprise the direct costs of operating the 570-mile road and

bridge system, accounted for 86.5 percent of this spending. The costs of operating the canals made up 10.5 percent of the total, while economic development grants and reserves represented 1.8 percent and 1.2 percent, respectively, over the ten-year period.

Capital spending – The Thruway Authority expends significant amounts yearly to repair and replace its roadway and bridges. The past ten years have seen several swings in capital spending. Average annual capital spending during this period was \$291.1 million, including \$223 million in highway and bridge work, \$40.4 million for facilities and plazas, and \$27.7 million for canals.

Although the Thruway Authority lists its planned capital projects in its annual budget plans, there is no indication that this listing reflects a comprehensive, prioritized capital plan. Publicly available documents provide no specific indication that the determination of the Thruway’s highway and bridge needs is based on actual traffic or engineering requirements. Without such information there is no way for the toll-paying public to be certain that the Thruway’s limited resources are deployed efficiently and appropriately.

Debt Service – Since 1992, when the Legislature and the Governor decided to continue Thruway tolls after the original bonds were repaid, the Thruway has issued General Revenue Bonds on nine separate occasions (1992, 1993, 1995, 1997, 1998, twice in 2005, 2007, and 2012). Some of the early proceeds from these bonds were used to refinance the \$84.5 million debt remaining from the Thruway’s original bonds, which had been scheduled to be paid off in 1996.²

The Thruway Authority has relied heavily on debt to support its capital program. Annual debt service payments have been steadily climbing in recent years and will continue to do so in the near future. This is a result of the capital needs associated with maintaining the Authority’s aging infrastructure, as well as a decline in the use of current resources (pay-as-you-go) to finance the Thruway Authority’s capital program. The portion of the Thruway capital program financed on a pay-as-you-go basis declined significantly, from nearly 60 percent to less than 20 percent, from 2005 to 2011.

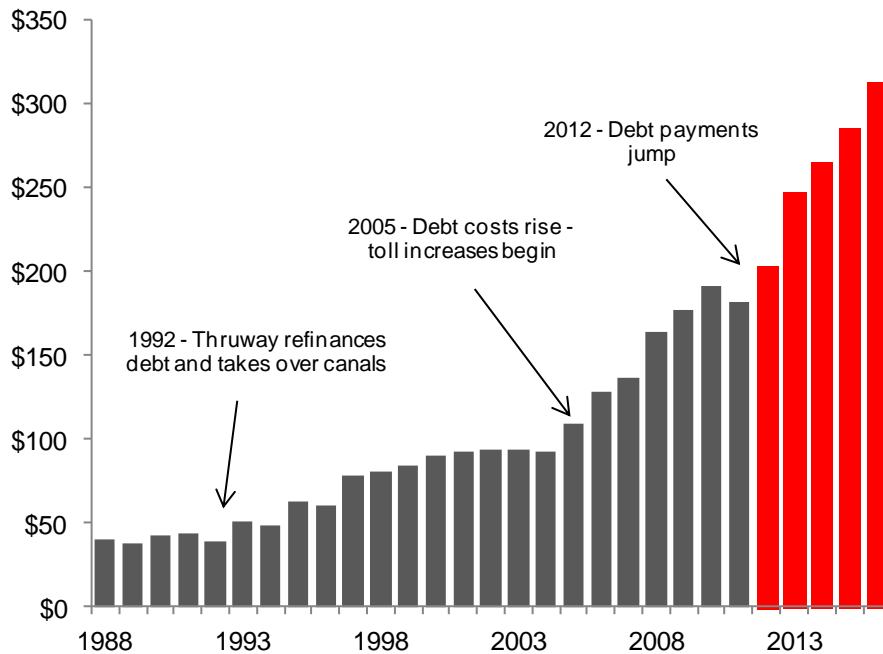
The Thruway currently has \$3.28 billion in outstanding General Revenue Bonds.³ Annual debt service payments were \$93 million in 2002, and have risen since to reach \$181.9 million in 2011. The Thruway estimates that by 2016 debt service costs will climb to \$312.4 million, a 72 percent increase in just five years and a 236 percent increase since 2002. These figures exclude the costs associated with the replacement of the existing Tappan Zee Bridge.

² New York State Thruway Authority, General Revenue Bonds, Series A, Official Statement, August 14, 1992, p. 2 and p. B-9.

³ Thruway website, accessed August 7, 2012. Thruway Authority debt outstanding totaled \$14.1 billion for the Authority’s fiscal year ended December 31, 2011. Of that total, almost \$11.1 billion is State-supported debt, which is not paid for with Thruway tolls or revenues. The State uses the Authority to issue bonds to support capital projects funded with State Personal Income Tax, gasoline taxes and other revenues. References in this report to the Thruway’s finances focus on the Authority’s own revenues and expenses, and exclude such State-supported projects.

Annual Debt Service Costs 1988 – 2016

(in millions of dollars – Estimated Future Costs in Red)



Source: Thruway Authority

Paying back its debt consumes an increasing share of Thruway expenses. Debt service accounted for 17 percent of Thruway Authority spending on average between 2002 and 2011. The Thruway projects that its debt service costs will jump to 23.9 percent on average in the five years from 2012 to 2016, reaching 25.2 percent in the final year of the current plan.

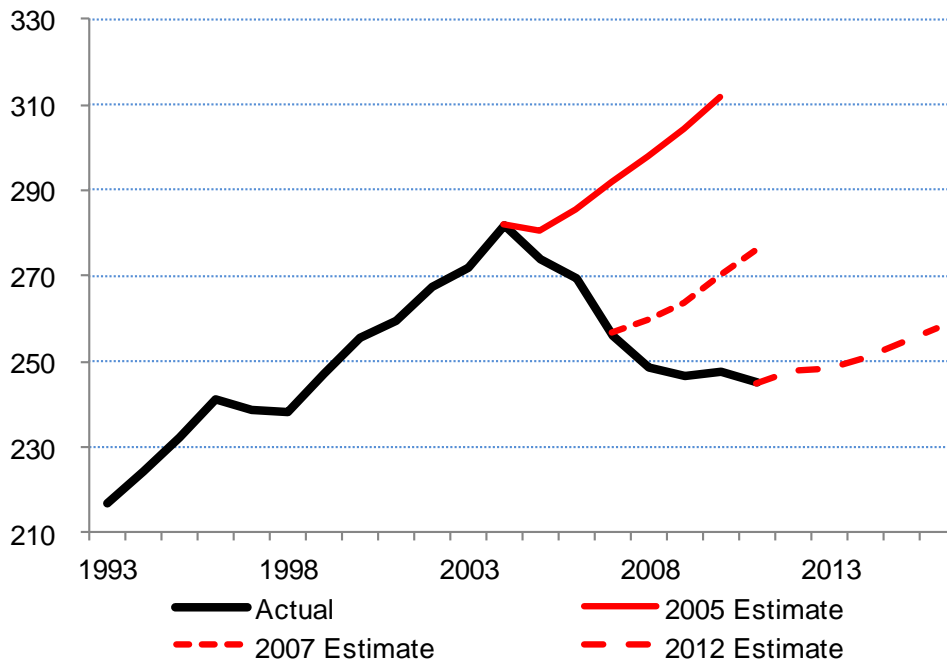
It is clear that debt, which is one means to finance capital spending, has become a driving force in the Thruway's budget. Toll increases now largely go to meet debt obligations, rather than current and future needs. Dramatically increasing debt service costs are placing a greater burden on the Thruway Authority and are contributing to its fiscal stress. As with the State as a whole, the Thruway's heavy reliance on debt has put it in a position of having limited flexibility to address its capital investment and operational needs.

Traffic Estimates – For the past seven years, the Thruway has consistently over-estimated traffic growth.⁴ This is another factor contributing to the Authority's fiscal stress. Traffic on the Thruway peaked in 2005 at 281.8 million trips and has steadily fallen since then. By 2011, the total was 245 million trips, a drop of 13 percent from the 2005 level. This decline is the result of higher fuel prices, the recession and continuing economic weakness, and the impact of toll increases between 2005 and 2010.⁵

⁴ New York State Thruway Authority, General Revenue Bonds, Official Statements, Series G, September 21, 2005, Series H, October 3, 2007, and Series I, June 27, 2012.

⁵ Jacobs Engineering Group, *New York State Thruway Authority Financial Requirements and Proposed Toll Adjustments 2012-2016*, May 2012, page III-6.

Thruway Traffic – Estimate vs. Actual (millions of trips)



Source: Thruway Authority

Throughout this period of decline, the Thruway Authority has projected ever-increasing traffic. In 2005, the Authority estimated that the total would reach 311.6 million trips by 2010; the actual figure was 247.6 million, a difference of 64 million trips, some 21 percent less than predicted. The story was similar in 2007, when the Thruway predicted that 2011 traffic would total 276 million trips. The actual figure was 245 million, or nearly 12 percent less. The Thruway’s latest estimate, made in the Spring of 2012, projects that traffic will increase by 5.2 percent by 2016. If the increase in traffic does not materialize as expected, toll revenues may be lower than projected, as has happened repeatedly in previous years.

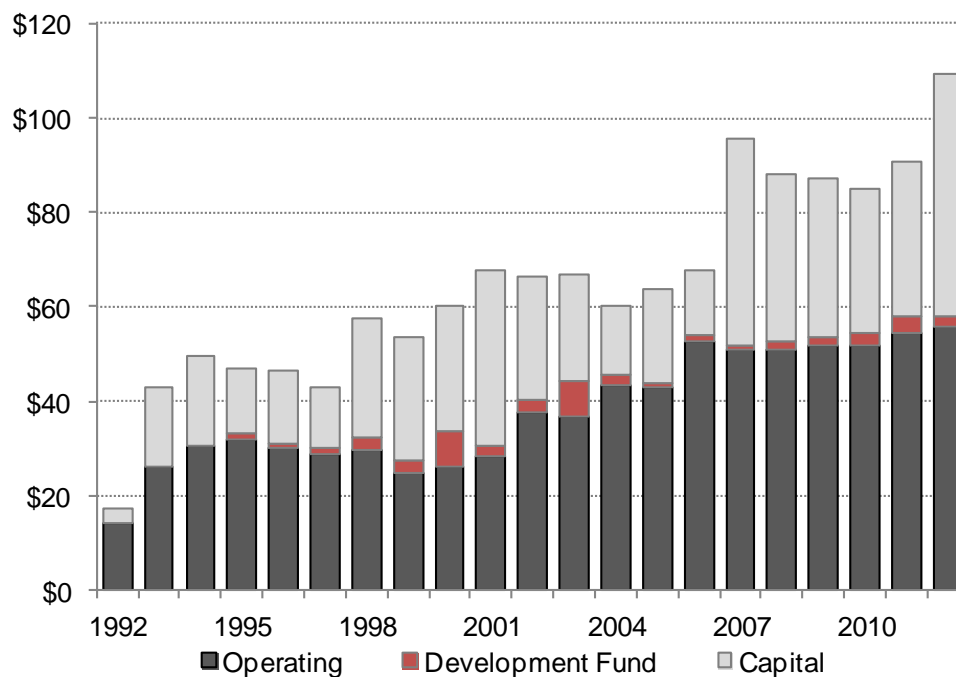
Cost of the New York State Canal System

The Thruway has spent over \$1.1 billion since 1992 to support the New York State Canal Corporation. Thruway budget estimates indicate that it will cost another \$436.5 million to operate and repair the canals between 2013 and 2016. Although the New York State Constitution forbids the Legislature to sell, abandon or otherwise dispose of the canals, choices regarding operational control and financial support for the Canal System are policy matters to be determined by the Governor and the Legislature.⁶

⁶ New York State Constitution, Article XV.

Canal Expenses 1992 – 2012

(in millions of dollars)



Source: Thruway Authority
 Note: 2012 expenses are estimates.

The canals are an important resource used for hydropower, agriculture, industry and recreation, as well as a significant part of New York’s history and development. When the Governor and the Legislature assigned the Thruway Authority the task of operating, maintaining and developing the Canal System starting in 1992, the policy change reflected two central premises.⁷ First, the transfer of responsibility from the State’s General Fund would not detract from the Authority’s core mission of providing a safe, convenient and affordable highway system. Second, the Authority’s financial resources and organizational expertise, along with the then-newly created Canal Recreationway Commission, would position the underused Canal System to improve its facilities and marketing such that new users would be attracted from around the country, and even around the world.

Neither of these hoped-for outcomes has occurred. The Thruway Authority has invested more than \$1.1 billion in the Canal System, and this drain of toll resources has also contributed to the deterioration of the Authority’s financial condition over the past decade. Meanwhile, despite major investments and new amenities, pleasure-craft activity on the Canal System in recent years is down by nearly one-third since the period immediately before the Thruway Authority assumed control.⁸ Furthermore, operational and capital expenses for the Canal System are projected to consume, on average, a larger share of total Thruway expenses from 2012 to 2016 (9.9 percent) than during the years 2002 to

⁷ Chapter 766, Laws of 1992. See also Governor’s Approval Memorandum for Approval Number 48 and Memorandum of the Assembly Rules Committee re A. 12138-A/S.9015.

⁸ 2010 New York State Statistical Yearbook, Nelson A. Rockefeller Institute of Government, page 609.

2011 (8.3 percent).⁹ Operational costs for the Canal System are projected at \$55.7 million in 2012, with additional capital expenses of approximately \$51.4 million.

Audits by the Office of the State Comptroller

The Office of the State Comptroller conducts periodic audits and other reviews of the Thruway Authority's finances, as it does with other State agencies and public authorities. A 2005 audit identified questions regarding the Authority's debt issuance costs and services. In 2007, when the Authority announced plans for a new round of toll increases to take effect over three years, Comptroller DiNapoli directed auditors to undertake a focused examination of the finances and operations of the Authority, including examination of E-ZPass tolls and capital spending and board governance at the Canal Corporation, a Thruway subsidiary. The resulting report identified issues including lack of prioritization and oversight of capital projects generally, continuous cost overruns in capital projects within the Canal System, uncollected E-ZPass tolls, and wide fluctuations in annual operating costs which suggested lack of attention to proper cost controls.

The report recommended a series of steps to improve management of the Authority's operations, finances and capital planning. Such reforms would include maximization of existing revenue streams, prioritization of projects within the overall capital plan, and improved financial controls to minimize cost overruns on construction and maintenance projects.

In 2012, auditors from the Office of the State Comptroller examined what actions, if any, Authority officials have taken to implement the recommendations in a 2008 report regarding maximization of E-ZPass tolls and fees. This new examination, the results of which are contained in a separate August 2012 report, found that the Thruway Authority had made progress in correcting some of the previously identified problems, but that additional improvements are needed. The Authority has requested a collection agency to take action regarding approximately \$18 million in outstanding toll and fee receivables for the two-year period ending March 31, 2012.

The Navigant Report and SAGE Commission Review

In May 2012, the Thruway Authority released the results of a study it had commissioned to review the Authority's history of financial and management decisions. The report by Navigant Capital Advisors included numerous criticisms of the Authority's past financial and management choices and recommended a variety of reforms to operations, capital planning and borrowing practices. Key points in the report, many of which echoed previous findings in audits by the Office of the State Comptroller, included:

- "Since 2001, growth rate of expenses has exceeded revenue."
- The Thruway Authority Board and management "historically have taken a 'hands-off' approach with assets such as the Canal and have neither identified nor acted upon key revenue enhancement and cost containment initiatives sufficient to offset their burden."

⁹ For certain years during the 2002 to 2011 period, expenses for the Canal System also include spending related to economic development projects.

- The Authority’s capital program has been characterized by “weak project execution,” lack of independent review to justify individual projects, and “insufficient coordination of strategic and financial planning.”

The Navigant report cited an analysis of State transportation agencies conducted in 2011 by the Governor’s Spending and Government Efficiency (SAGE) Commission. Referencing SAGE Commission information, Navigant found that “administrative/support functions are staffed at equal levels, though the NYDOT has a system of lane miles more than 15 times the size of the Thruway Authority” – raising questions about potentially excessive administrative costs at the Authority.¹⁰ A preliminary assessment by the SAGE Commission found that \$50 million to \$82 million in savings might be attained from administrative support consolidation, field and core activity consolidation, and strategic realignments among the Department of Transportation, the Thruway Authority, and the Bridge Authority.¹¹

“Organizational changes including consolidation with other transportation agencies and divisions offer substantial potential savings opportunities but have yet to be acted upon,” Navigant concluded. “Duplicate division consolidation at Thruway and Canals alone could realize meaningful savings.”

The Jacobs Engineering Report

Under Section 2804 of the Public Authorities Law, certain authorities including the Thruway Authority must provide a detailed report on the need and implication of any increase in tolls or fees before proceeding with such changes. In May 2012, the Authority released a report by Jacobs Engineering Group which reviewed the Authority’s finances and recommended the toll increase that now is under formal consideration by the Authority Board. The Authority is also required to produce this report to satisfy certain requirements in its General Bond Resolution.

The Jacobs report identified a declining debt service coverage ratio as the impetus for a significant toll increase. That measure represents the ratio of net revenues to debt service – in effect, the Authority’s ability to pay off borrowing as it has committed to bondholders. The Thruway Authority’s General Bond Resolution requires a minimum coverage ratio of 1.2, while the Authority Board has adopted Fiscal Management Guidelines that provide for a minimum ratio of 1.5.

The Jacobs report estimated that, with current tolls, the Authority’s coverage ratio would decline to 1.49 in 2012, 1.24 in 2013 and below the 1.2 level required in current bond covenants in 2014, 2015 and 2016. Failure to meet the coverage ratio contained in the General Bond Resolution could result in downgrading of Thruway Authority bonds, thus increasing future borrowing costs, among other potential negative ramifications.

The Jacobs report further estimates that, with the proposed toll increase, the Authority’s coverage ratio would decline to 1.42 in 2015 and 1.29 in 2016. Because such ratios are below the Authority’s adopted Fiscal Management Guidelines, the report concluded that,

¹⁰ Navigant Capital Advisors, New York State Thruway Authority Executive Summary Report, May 24, 2012, page 24.

¹¹ SAGE Commission Presentation, December 15, 2011, pages 10-15.

“further actions may be . . . required during the final year of the 2012-2015 Multi-Year Capital Program.” Such further actions could include additional toll increases or other budgetary changes.

Thruway Plans for Operational Streamlining

As described earlier in this report, previous audits by the Office of the State Comptroller as well as the independent Navigant review commissioned by the Thruway Authority found substantial opportunities for cost savings in Authority operations. In recent months, under new leadership, the Authority has clearly embarked upon a path of identifying and implementing significant changes. The scope of such changes, however, is not yet clear.

In releasing the Navigant report in May 2012, the Thruway Authority announced it was considering an operational streamlining program including alignment of employee benefits with other State agencies and other changes. Operational cuts of \$25 million were planned for 2012, and the Authority Board was expected to consider a two-year plan “to reduce operating expenses by \$100 million.”

In June 2012, the Thruway Authority placed a notice of its proposed toll increase and related public hearings in the *New York State Register*, as required by the State Administrative Procedure Act.¹² The notice stated that, in proposing the 45 percent average increase in tolls for certain users, the Authority had established goals including maintenance of a debt service coverage ratio of at least 1.6 in 2012. In addition, the notice stated, “Through an aggressive operational streamlining program, the Authority will achieve \$119.5 million in savings from 2013 through 2016.” Details of such streamlining, representing an average of approximately \$30 million annually, have not yet been made public.

Conclusion and Recommendations

In setting the level of tolls for users, the Thruway Authority must balance competing needs. It must generate adequate resources for operations, essential capital investments and debt service, while providing a transportation network for New York State that is both affordable and economically competitive.

The Authority has described its proposed 45 percent increase as “modest.” Reasonably, numerous Thruway users, truck drivers, business leaders and others across the State have questioned this characterization.

The Jacobs report suggests that the toll increase “will maintain the Thruway’s position as a relatively inexpensive toll facility.” Certain toll highways in other states – including Virginia, Delaware and Maryland – impose commercial rates that are higher than the current Thruway tolls on five-axle trucks and would remain higher even after the proposed increase. However, motor fuel taxes and other costs in each of these three states are substantially lower than those in New York. As of July 2012, combined local, state and federal taxes on diesel fuel were less than 50 cents per gallon in Delaware,

¹² New York State Register, June 20, 2012, page 19.

Maryland and Virginia, but 73.5 cents in New York, according to the American Petroleum Institute.¹³ The Thruway's tolls for larger trucks are currently 43 percent higher than those on the main branch of the Massachusetts Turnpike, and would rise further out of line after the planned increase.

Recent news reports have indicated that the Thruway Authority has considered setting the toll on the new Tappan Zee Bridge at \$14, up from \$5 on the existing bridge, to help pay for the new span. On August 10, the Governor released a letter to the Thruway Authority Chairman and Executive Director asking that the contemplated \$14 level for the new bridge toll be reduced. In combination with any major increase, high tolls on the rest of the Thruway System could have significant negative impacts on traffic. Such impacts, in turn, could depress the revenue gains the Authority is counting on to support debt service payments and increase the need for State-funded or locally funded capital investments on non-tolled highways or roads if significant truck traffic moves off the higher-cost Thruway.

Until the Thruway Authority has specified and begun to achieve the significant cost savings it plans to undertake, it is not possible to determine how much new revenue must be obtained to support projected debt service payments in coming years. It is also unclear what steps, if any, the Authority is pursuing to target the potential new revenues from existing sources that have been identified by the Office of the State Comptroller and in the Navigant report. In short, the Authority is pursuing a significant toll increase while other, less economically disruptive options may yet be available.

Before finalizing action on another toll increase, the Thruway Authority should consider steps including:

- Publicly and specifically identifying options for operational cost savings, including recommendations by the Office of the State Comptroller and Navigant as may be appropriate, as well as steps already identified or still under consideration by the SAGE Commission.
- Reforming the Thruway Authority's capital planning and borrowing practices. Establishing a prioritized plan for capital improvements, aligned with the Authority's financial resources and the infrastructure goals of the State as a whole, would provide the public and elected officials an opportunity to address the comparative importance of competing projects.
- Requesting an independent analysis of the Canal System that would examine ways to improve and streamline operations, seek new funding streams, and develop a realistically attainable vision for its future role in the upstate economy.
- Analyzing past and present traffic estimates to identify sources of erroneous projections that have led to revenue shortfalls and, if necessary, to fine-tune projections for the next few years.
- Reporting traffic and revenue levels quarterly, and issuing financial and management updates periodically throughout the year, to enhance public confidence in the operational streamlining and other improvements that Thruway leaders indicate are now underway.

¹³ American Petroleum Institute website, oil and natural gas overview, accessed August 8, 2012.