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**Thomas F. Prendergast**  
Chairman and Chief Executive Officer



## Metropolitan Transportation Authority

State of New York

June 10, 2014

Honorable Andrew M. Cuomo  
Governor of New York State  
NYS State Capitol Building  
Albany, NY 12224

✓ Honorable Thomas P. DiNapoli  
Office of the State Comptroller  
633 Third Avenue, 31<sup>st</sup> Floor  
New York, NY 10017

RE: Response to Report #2011-S-16 – Selected Aspects of Bus Procurement

Gentlemen:

On March 3, 2014, the Office of the State Comptroller issued the above referenced audit report. As required by Section 170 of the Executive Law, I am providing you with the attached response which addresses the recommendations contained in the report.

A copy of the final audit report is attached for your convenience.

Sincerely,

Thomas F. Prendergast  
Chairman and Chief Executive Officer

Attachments

**RECEIVED**  
EXECUTIVE CORRESPONDENCE

JUN 16 2014

OFFICE OF THE STATE COMPTROLLER  
THOMAS P. DINAPOLI  
COMPTROLLER

*The agencies of the MTA*

MTA New York City Transit  
MTA Long Island Rail Road

MTA Metro-North Railroad  
MTA Bridges and Tunnels

MTA Capital Construction  
MTA Bus Company

# Memorandum



## Metropolitan Transportation Authority

**Date:** May 30, 2014

**To:** Thomas Prendergast, Chairman and Chief Executive Officer,  
Metropolitan Transportation Authority

**From:** Carmen Bianco, President, NYC Transit

A handwritten signature in black ink, appearing to read "Carmen Bianco", written over the "From:" line.

**Re:** New York State Comptroller Final Report 2011-S-16  
Selected Aspects of Bus Procurement

As required by Section 170 of the Executive Law, detailed below are NYCT comments and updated actions that have been taken to address the recommendations contained in the Final Audit Report concerning Selected Aspects of Bus Procurement.

### Recommendation #1

Adequately plan bus procurements to maximize federal grant funds and to allow time to process any waivers from federal eligibility requirements that may be necessary.

### Management Response

As indicated in our response to the Final Draft Report, NYCT has and will continue to properly plan bus procurements. It is important to note, that contrary to the OSC assertions, there is no guarantee that using a method other than the MTA strategy would have guaranteed the availability of a greater share of federal funds.

### Recommendation #2

Require market surveys be done independently and in a timely manner to verify the market price of similar buses.

### Management Response

Agree. The draft audit report states (page 6):

"The MTA bus procurements during our audit period should have complied with MTA's Materiel Procurement Procedure IV-A-16 'Cost/Price Analysis Requirement for Procurements.' The Procedure specifies that:

- A market survey should be performed prior to exercising contract options to buy additional buses.”

The procedure cited in the audit report, DPM IV-A.16, states only that market surveys must be performed *if appropriate* (see page 26 of DPM IV-A.16). The initial NYCT response set forth our reasoning in detail why formal market surveys were not appropriate for the option exercises cited in the audit findings. For example, in connection with the exercise of the option cited in the report for 850 low floor, hybrid buses a market survey was performed. NYCT contacted the only two qualified manufacturers of such buses; one manufacturer was the contractor with whom NYCT had the option; the other manufacturer declined to submit pricing. Because our bus suppliers are pre-qualified based on compliance with our unique specifications, any accurate market survey can only be based on pricing from those qualified suppliers. Any prices obtained for unqualified buses that do not meet NYCT’s specifications would be misleading.

Nevertheless, NYCT will continue to ensure that independent market surveys are conducted (when appropriate) before exercising contractual options to purchase additional buses.

### **Recommendation #3**

Ensure that a determination of fair and reasonable pricing is completed in writing prior to awarding a contract.

### **Management Response**

Agree. The audit report asserts on page 6 that DPM IV-A.16 requires that “a ‘Fair and Reasonable’ determination of the price must be made by the CPAU [Cost Price Analysis Unit] at the conclusion of negotiations.” As previously stated in the initial NYCT response, DPM IV-A.16 does not require this. DPM IV-A.16 states that “to expedite a procurement action, the Cost/Price Analyst may issue a preliminary fair and reasonable determination, to be followed by a formal memorandum.” More importantly, the initial NYCT response demonstrated in detail that NYCT had established, prior to award of all contracts examined in the draft audit report; that the prices were fair and reasonable. These fair and reasonable determinations were documented in each recommendation for award presented to the MTA Board. A detailed memorandum explaining the reasons for finding a price fair and reasonable is always prepared after negotiations; the memorandum is often finalized prior to contract award.

Page 1 of the audit report states as a key finding that “MTA did not follow procedures by failing to notify the MTA Board when two contracts were awarded prior to a fair and reasonable determination.” This statement is incorrect, since, as stated above, the fair and reasonable determination was included in all staff summaries presented to the MTA

Board. This can be verified from the staff summaries which were provided to OSC in two of our previous written responses.

NYCT will ensure that when the fair and reasonable determination is made prior to the date of the detailed memorandum explaining the reasons for the determination, the prior determination will be documented.

**Recommendation #4**

Ensure that pricing support from Audit Services is completed in time for negotiations with bus manufacturers and in time for fair and reasonable pricing determinations.

**Management Response**

Agree. The audit report indicates on page 7 that negotiations were completed before the results of field pricing support provided by MTA Audit Services were available for two non-competitive bus contracts (B-31138 with Nova Bus and B-31122 with New Flyer). As was discussed at length in the initial NYCT response, both contracts in question were for standard 40-foot diesel buses and NYCT was able to determine that the prices for these contracts were fair and reasonable by comparison to the price for the competitive bus procurement B-40641, which was negotiated less than seven months before the two procurements in question, as well as through other cost or price touchstones.

NYCT will continue to ensure that field pricing support is obtained from MTA Audit Services for bus procurements when required by DPM IV-A.16.

**Recommendation #5**

Ensure that performance criteria are established to benchmark and evaluate performance of test bus fleets.

**Management Response**

As indicated in our response to the Final Draft Report, NYCT has effective criteria for evaluating test bus fleets, as evidenced by documentation provided to the auditors. Certain components and functions, such as wheelchair ramps and rear door interlock have a pass/fail test criteria. Other components such as fuel consumption do not have a pass/fail test criteria due to the variety of duty cycles and traffic conditions encountered. Additionally, NYCT measures differences in engine performance of different manufacturers' test buses via the mean distance between failure (MDBF) and takes these differences into account in the form of evaluative factors during the competitive RFP process.

**Recommendation #6**

Reassess the minimum number of buses required to be procured to permit an effective test evaluation of new buses.

**Management Response**

As indicated in our response to the Final Draft Report, NYCT disagrees with this recommendation. As previously explained to the auditors, smaller test fleets provided inadequate and inconsistent test results from which to make informed decisions concerning future competitive procurements. NYCT selected 90 bus test fleets because that size more closely approximated the anticipated performance of buses manufactured by vendors in full production mode. Larger test fleets also provide more accurate indications of MDBF and component performance. Additionally, a fleet of 90 buses can be distributed amongst a number of depots in order to gain exposure to duty cycles which may vary widely. The attached memo, Attachment A from the Chief Maintenance Officer to the Senior Vice President NYCT/President MTAB memorializes the rationale behind the decision to test and evaluate fleets of 90 buses.

**Recommendation #7**

Require that MTA Bus and Transit managers prepare and maintain documentation to support all required factors to be used to determine the number of buses procured.

**Management Response**

NYCT has drafted a Departmental Procedure concerning the bus procurement process. The draft has been circulated to the respective departments for comments.

In addition to our responses to the audit recommendations, we would also like to take the opportunity to respond to the State Comptroller's Comments that appeared on Page 21 of Report 2011-S-16, dated March 2014.

**Comment 2** – In connection with the “Key Finding” stated on page 1 that “MTA did not follow procedures by failing to notify the MTA Board when two contracts were awarded prior to a fair and reasonable determination”, OSC’s Comment 2 states “The documents we have related to the two contracts show that the Staff Summary does not mention that the fair and reasonable determination was not done when the contracts were awarded.” In fact, the Staff Summaries for the contracts make a formal statement that the price was fair and reasonable and summarize NYCT’s reasons for that determination.

**Comment 3** - While we agree that the purchase of over the road buses from Prevost was for buses from a new manufacturer, the comment implies that the other diesel bus fleets procured were not substantially different than the existing fleet of diesel buses. This was not the case with New Flyer and Daimler procurements as NYCT, not having purchased

40' diesel buses since the late 1990's, needed to gather performance data on the iterative changes to diesel technology based on EPA mandated emission reduction standards. Additionally, while NYCT purchased Nova buses in the past, they were high floor and this is the first time that NYCT was purchasing a low floor bus from Nova of a completely different design, manufactured in a new facility. While NYCT had purchased 60' high floor articulated buses in the past, the test fleet for the Nova articulated buses was the first time that NYCT had purchased 60' low floor articulated buses.

The remaining portion of Comment 3 deals with the specifications and evaluation criteria for new technology and implies that NYCT did not in fact evaluate new technology in these procurements. As previously explained there are numerous sub systems that are being evaluated from a performance standpoint such as propulsion variations, electric cooling systems for the engine compartment, disc brake systems, variations on air conditioning compressor types, etc. The relevance of the Comptroller's comment concerning the 1992 DOT standard for wheelchair lifts and ramps cannot be understood.

**Comment 4** – The commentary referring to the number of buses that comprised the test fleet has already been addressed under Recommendation #6 above. With respect to testing new and unique systems, numerous examples were provided throughout the period of the audit in meetings as well as correspondence that clearly exemplified that NYCT was not simply “reviewing the next year’s offerings from various manufacturers.” Finally, certain statements in Comment 4 are simply incorrect. Comment 4 states

“...these procurements were carried out under a provision of law that allows MTA to avoid normal competitive procedures specifically to permit tests of new technologies. MTA’s use of this provision carries with it the responsibility to ensure that it is actually testing something new and unique, and not just reviewing the next year’s offerings from various manufacturers. Additionally, the use of this section bears with it the need for a testing plan with formally stated expectations of successful performance, which was not provided to the auditors. Rather, it appears that the MTA may have been testing current model year offerings of transmissions and engines, but not new technology.”

The provision of law cited is paragraph 9 (d) of section 1209 of the Public Authorities Law which allows the Authority to dispense with competitive bidding when “the authority wishes to experiment with or test a product or technology or new source for such product or technology or evaluate the service or reliability of such product or technology.” Contrary to OSC’s assertion, this provision contains no reference to “new technologies.” This provision requires MTA to test either a product or a technology, or to evaluate the service or reliability of either a product or a technology. The requirements of the provision are satisfied if a product is tested. They are also satisfied if the service or reliability of a product is evaluated. OSC’s assertion that only tests of new technologies are permitted under this provision is incorrect.

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NYCT's use of the quoted provision of the statute complies with sound business strategy. It is prudent for NYCT to test products that it has not previously purchased or tested. In this regard, we also take issue with the following statement that appears on page 9 of the audit report:

“In order to qualify for the exception from competitive procurements under State law, MTA needed to evidence it was testing either a new vendor or a new technology. Only one of the procurements in the population reviewed for this audit [i.e., procurements of test bus fleets] was from a vendor with which MTA had not made previous procurements.”

The requirements of the statute are addressed above. With regard to business strategy, an articulated bus from a particular manufacturer is very different from a 40 foot diesel bus from the same manufacturer. It is only prudent to test the articulated bus before considering a substantial purchase of such buses, even if NYCT has previously purchased a 40 foot diesel bus from the same manufacturer.

Finally, Comment 4 asserts that MTA's use of this provision includes “the need for a testing plan...” That assertion is simply incorrect.

cc: D. Irick

## Memorandum



## Metropolitan Transportation Authority

State of New York

Date June 22, 2012

To Darryl C. Irick, Senior Vice President, NYC Transit Department of Buses  
President, MTA Bus Company

From Henry Sullivan, Chief Maintenance Officer, NYC Transit Department of Buses and  
MTA Bus Company

Re Policy Regarding Purchase of 90-Bus Fleets for In-Service Test and Evaluation

This memorandum is to memorialize our current policy regarding the procurement and size of test bus fleets, and to seek your approval of this written policy. Beginning in 2008, the appropriate number of buses to be procured for a test fleet was determined to be 90. The details and rationale for this policy are set forth below.

As you know, procurement and operation of test bus fleets in passenger service enables us to evaluate new bus models on a wide range of operating performance criteria. The results enable us to ensure the reliability and overall effectiveness of a bus model before making a commitment to incorporate the bus model into our fleet on a wide scale. A bus to be tested can fall into one of three categories: approved manufacturer with a new model bus, approved bus configured with different sub-components, and a new manufacturer.

It is important to note that our authorization to procure a test fleet under Section 1209(9)(d) of the Public Authorities Law does not identify a specific quantity. It is up to the agency to determine what quantity would provide a reasonable basis for assessment. Therefore, when establishing the size of the test fleets to be procured, we worked to strike a balance between obtaining a large enough fleet to yield an effective evaluation in a reasonable time frame, and limiting the capital investment and exposure of our operation.

We established the sample size of 90 buses per fleet for the following reasons:

- *It is sufficient to complete an effective and thorough evaluation of overall bus performance, as well as specific components and subsystems, in multiple operating environments.*

A test fleet of 90 buses is necessary to distribute the buses across a variety of locations throughout the metropolitan area. This is important because our operating environment involves several different types of routes, duty cycles, and facilities. With 90 buses, we are able to test the bus in a variety of these conditions during approximately the same time period.



At the same time, the collective information we gather for the fleet provides a basis to judge the overall reliability of the bus. Specifically, the purchase of 90-bus test fleets gives us a more accurate indication of the key performance indicators, such as miles per gallon (MPG) and Mean Distance Between Failures (MDBF) than a smaller test fleet would allow. It should be noted that this is not a pass/fail test. The data gathered will be used to identify preferred subsystems and as part of the evaluation criteria for upcoming procurements.

Notably, this test fleet size represents one-third the size of a mega depot and one-half the size of a standard depot. Although the buses in a test fleet do not all operate in the same location, the collective information we gather gives us a sense of how a depot operating a substantial number of the buses would be affected (positively or negatively). Similarly, the collective data we gather on the fleet allows us to effectively evaluate major components and subsystems, including the wheelchair, air conditioning, and lighting systems. This assists in the accurate prediction of costs associated with maintaining the bus until end of life.

In contrast, based on our past experience, evaluation results from smaller test fleets, positive or negative, did not accurately represent future performance of a larger fleet. Further, for a smaller fleet, the manufacturer likely will not have a dedicated staff at local locations to handle service.

- *It enables us to gather data in a timely manner.*

The necessary data for the evaluation can be gathered in a reasonable time frame, as the collective operating exposure (mileage) of the test fleet accrues relatively quickly across 90 buses. Using a prior 90-bus test fleet as an example, data collection has been efficient: In 6 months, 500,000 miles was accumulated in a Manhattan duty cycle, and 750,000 miles was accumulated in an outer borough, high-speed duty cycle. With smaller test fleets, evaluation timelines were extended, as it took much longer (even years) to accumulate the necessary mileage for an effective evaluation.

- *It enables us to test the production capability of the manufacturer.*

A test production run of this size approximates the results of a full series production run. This enables our New Bus Specifications, Technical Engineering, and Customer Services staff to monitor and evaluate the bus builder's manufacturing capability and consistency, as well as the veracity and effectiveness of the builder's quality assurance process. This is because the larger quantity precludes the buses from being built in an engineering or research development setting.

Re: Approval of Justification for 90-Bus Test Fleet Size

June 22, 2012

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- *It enables us to test the warranty programs and other support systems provided by the manufacturer.*

In addition to evaluating the bus and subcomponents, it is also critical to assess the manufacturer's service support organization, such as warranty and parts support. A test fleet of 90 buses yields sufficient operating experience to evaluate these factors.

For example, as mentioned above, this test fleet size enables more effective testing and evaluation of individual components and sub-systems. This helps us to identify defect trends and other problematic issues, which gives us the opportunity to assess the responsiveness and capability of the manufacturer in providing warranty and material support. Further, the identified issues can be addressed with the manufacturer prior to any subsequent procurement. This helps improve the reliability of buses we may purchase later on.

- *It limits the exposure of our operations, and we can take additional steps to minimize risk as appropriate.*

Based on our overall fleet size (approximately 5,600 active buses for Spring 2012), a test fleet of 90 buses is under 2% of our total fleet requirement. This means that even a significant fleetwide problem in a test fleet should have a limited impact on our customer service operations.

It is also important to note that we impose additional thresholds and financial terms when testing a bus from a new manufacturer and/or based on a new technology. For example, we may require the manufacturer to produce a very limited number of buses, and require them to operate successfully for a period of time before allowing the manufacturer to proceed to 30 units; then, those units would need to perform successfully for a period of time before proceeding to 90. In a prior case, when the initial quantity of buses did not perform as required, the buses were returned to the manufacturer and NYC Transit received a full refund.

For these reasons, a 90-bus test fleet provides the appropriate balance: it affords us a thorough test of the bus in multiple environments, as well as a test of the manufacturer's production, service, and support systems, while limiting the exposure of our operations to a small fraction of our fleet. Overall, the program helps us to ensure that future investments of public resources in bus procurements are as effective as possible.

Approved: \_\_\_\_\_



Darryl C. Irick

Senior Vice President, NYC Transit Department of Buses

President, MTA Bus Company