

## TORONTO TRANSIT COMMISSION REPORT NO.

**MEETING DATE:** April 27, 2009

**SUBJECT:** PROCUREMENT AUTHORIZATION – DESIGN AND SUPPLY OF  
LOW FLOOR LIGHT RAIL VEHICLES

### **ACTION ITEM:**

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#### **RECOMMENDATION**

It is recommended that the Commission authorize:

1. The award of a contract to Bombardier Transportation Canada Inc. in the amount of \$993,008,166 (\$CDN), inclusive of all applicable taxes and subject to adjustment for Foreign Currency Exchange Rate Variance and Escalation, for the Design and Supply of 204 Low Floor Light Rail Vehicles.
2. The expenditure of funds up to a total allowance amount of \$293,100,000 (\$CDN), inclusive of all applicable taxes, with respect to the 204 Low Floor Light Rail Vehicles, for the following:
  - (a) Escalation Adjustment
  - (b) Foreign Currency Exchange Rate Variance Adjustment
  - (c) Spare Parts
  - (d) Specified Options
  - (e) Potential Contract Changes

For a total authorized expenditure of up to \$1,286,108,166 (\$CDN) inclusive of all applicable taxes, related to Recommendations 1 and 2 above.

3. That the authorizations and award of a contract, as set out in recommendations 1 and 2 above, be subject to the receipt of funding commitments.

**FUNDING**

Sufficient funds have been budgeted in the 2009 – 2013 Capital Program to accommodate this contract award and other related project costs.

Total Authorized Expenditure (Recommendations 1 and 2)	\$1,286.1 Million
Less GST Rebate	<u>(\$ 56.9) Million</u>
Net Total Authorized Expenditure	\$1,229.2 Million

The recent Provincial budget announced the introduction of a Harmonized Sales Tax (HST) effective July 1, 2010. Staff will be working to confirm the application of the PST rebate on this contract.

Funds in the amount of \$1.249 Billion are included in Project 4.18 – Purchase of 204 New LRV Cars, as set out on Pages 1083 – 1091R of the TTC's 2009 – 2013 Capital Program which was approved by Toronto City Council on December 10, 2008. Council's approval, however, was contingent upon confirmation of funding for the purchase of 204 new Light Rapid Transit Vehicles and that the TTC not enter into any long-term commitments before such funding is confirmed.

Funding requests have been made to both the Province of Ontario and the Government of Canada; however, at the time of writing this report, confirmation of funding has not been received from either the Provincial Government or the Federal Government.

**BACKGROUND**

Staff identified a requirement for 204 new low floor light rail vehicles to replace our aging city fleet, to provide for natural ridership growth and congestion relief efforts. In order to stimulate interest in this requirement and a better price through amortization of front-end engineering and manufacturing tooling costs over a larger quantity, the procurement documents were structured to reflect a minimum award of 204 vehicles. In addition, the procurement documents included an option to purchase additional vehicles for use in any approved Transit City projects.

(a) Canadian Content:

Prior to the issuance of the original RFP, the TTC retained an external third party consultant, Booz Allen Hamilton (Booz Allen), to conduct a review of the Canadian marketplace to determine the highest possible level of Canadian Content for low floor light rail vehicles, while also ensuring competition. At the December 18, 2007 Commission meeting, Booz Allen reported that the maximum Canadian content requirement that the Canadian marketplace could support and still attract at least two bidders was 25%. The Commission adopted the Booz Allen recommendation and established a level of 25% Canadian Content in an effort to ensure that the new low floor light rail vehicles contained that highest level of Canadian Content, while also ensuring that there would be competition in the procurement of the vehicles.

In September 2008, the Province of Ontario also adopted a policy on Canadian Content for transit vehicles and established a level of 25% Canadian Content.

(b) Original RFP (January 2008)

A Request for Proposal was posted on the TTC's Web site as of January 17, 2008. Nineteen companies were issued copies of the proposal document, out of which two submissions were received. Based on the review of each submission, it was determined that neither bidder had provided a proposal that complied with the TTC requirements as set out in the Request for Proposal documents. As a result, the RFP was cancelled. This decision was supported by an independent fairness monitor (The Honourable Coulter A. Osborne), retained to oversee the evaluation of the proposals.

(c) Structured Multi-Phase Bid Process (August 2008)

At the August 27, 2008 Commission Meeting, staff was directed to proceed with a Structured Multi-Phase Bid Process (SMPBP) with three car builders that had demonstrated experience in producing 100% low floor light rail vehicles. These companies were Alstom Transportation Inc. (Alstom), Bombardier Transportation Canada Inc. (Bombardier) and Siemens Canada Limited (Siemens).

**DISCUSSION**

A kick-off meeting for the SMPBP (Step 1) was held on September 12, 2008 to explain to the three potential bidders how the SMPBP would be conducted, as well as the proposed schedule for the steps in the SMPBP and to obtain feedback on the process. The SMPBP offered potential bidders an opportunity to work interactively with the TTC to ensure that any proposal submission would be compliant with the TTC requirements while not exposing the bidders to unacceptable risks, which could restrict competition.

The SMPBP involved technical and commercial meetings (Step 2 and 3, respectively) with each of the bidders, as requested, to ensure a complete understanding of the scope of work and to ensure the specifications were achievable. The RFP document was normalized to reflect the discussions with bidders that participated in the meetings. During the technical meetings each bidder was required to provide technical submission information that clearly demonstrated how it would meet and comply with the specific requirements detailed in the various Sections of the RFP document's Technical Specification, including the five critical pass/fail technical requirements (which remained unaltered from the initial RFP document and included Safety Against Derailment, Gradeability, Accessibility, Energy Efficiency, Clearance Envelope).

As a condition of the Contract to the successful bidder, the Commission has reserved the right, at its sole discretion, to exercise an option for up to 400 Transit City LFLRVs at an acceptable negotiated price with the highest practical level of Canadian Content achievable in a Canadian market. This option would amend the Contract accordingly for a modified version of the proposed LRVs detailed in the technical specifications, incorporating additional features specifically for Transit City (such as bi-directional operation, multiple unit operation capability, pantograph current collection, etc.).

Following completion of the technical and commercial discussions, a formal Request for Proposal package was issued to the bidders (Step 4 of the SMPBP) on January 9, 2009. Shortly after the issuance of the formal RFP, Alstom provided a notification that it would not be submitting a formal bid.

A Pre-Bid Meeting was held with Siemens and Bombardier on February 6, 2009, where it was emphasized to the bidders that they were required to provide a complete technical submission consistent with the RFP technical specifications and a complete commercial submission, including a Canadian Content Plan showing how the bidder proposed to meet the minimum 25% Canadian Content requirement. Bidders were advised that no exceptions to the Proposal Documents would be considered. The Proposal Evaluation Process detailed in the RFP Document was also highlighted, explaining that if both Siemens and Bombardier provided compliant bids, then the recommendation for award of the contract would be based on the lowest Total Proposal Price submitted for the base order of 204 vehicles.

In accordance with the Commission's August 27, 2008 directive to staff, two Fairness Monitors were retained to provide independent reports on the evaluation process for both the commercial and technical portions of the RFP. The Honourable Coulter A. Osborne, former Associate Chief Justice of Ontario and former Integrity Commissioner for Ontario, was retained to monitor the commercial evaluation. Mr. Walter R. Keevil, Chief Rail Equipment Engineer at Chicago Transit Authority, was retained to monitor the technical evaluation. Mr. Keevil has over 40 years of experience within the transit industry and has been responsible for vehicle engineering matters on at least four new rapid transit vehicle orders.

Formal bid submissions were required to be submitted by 2:00 p.m. February 27, 2009 with a bid validity period for this procurement of 120 calendar days from the bid closing (June 27, 2009). The submissions were to include all of the required submittals to confirm that the vehicles proposed would meet the Commission's requirements.

(a) Proposal/Evaluation Summary:

Bombardier Transportation Canada Inc. and Siemens Canada Limited each provided compliant proposal submissions prior to the proposal closing deadline, and are summarized as follows:

	<u>PROPOSAL SUMMARY</u>	
Proponents:	<u>Bombardier</u>	<u>Siemens</u>
Commercial Compliance:	Yes	Yes
Technical Compliance:	Yes	Yes
Total Proposal Price (\$CDN):	\$993,008,166 (*)	\$1,525,832,084 (*)

(\* - Stated in Canadian Funds which includes all applicable taxes, duties, brokerage charges, freight FOB Site and all other costs and fees.)

The submitted proposals by both Bombardier and Siemens contained all the requested Commercial Submission Requirements, in accordance with the RFP Document, including a Canadian Content Plan. The submissions from both Bombardier and Siemens were complete and did not contain any exceptions or qualifications to the commercial requirements detailed in the RFP. The Canadian Content plans for both Bombardier and Siemens were reviewed by staff and its consultant, Booz Allen, to ensure that the plans, as submitted, met the requirements as set out in the Proposal Documents. Based on the review, TTC staff and Booz Allen confirmed that the plans, as submitted, met the requirements of the RFP and that each bidder submitted a Canadian Content Plan detailing how the bidder proposed to meet the minimum requirement of 25% and included a year-to-year breakdown of Canadian Content, as required.

The submitted proposals also contained all the requested Technical Submission Requirements, including clear and detailed description of how the specific requirements of the RFP Document's Technical Specification would be met. The submissions from both Bombardier and Siemens were complete and did not contain any exceptions or qualifications to the technical specification requirements detailed in the RFP.

The evaluation of the proposals for both the technical and the commercial portions were reviewed with the Fairness Monitors. As set out in Appendices A and B each Fairness Monitor has concluded that staff fairly followed the evaluation process detailed in the RFP Documents.

The Honourable Coulter A. Osborne, Fairness Monitor for the commercial evaluation, has concluded:

I am also satisfied that the RFP itself is a neutral document in the sense that its contents provide neither proponent with an advantage or expose either proponent to a disadvantage.

...

In my opinion, all the provisions of the RFP relevant to the parties commercial submissions were followed in the evaluation process, and, as I have said, the evaluation process itself was conducted fairly.

Mr. Walter R. Keevil, Fairness Monitor for the technical evaluation, has stated:

That the process put in place by the Commission guaranteed that the bidders had full knowledge of the technical and commercial requirements and had ample opportunity to discuss and clarify all aspects of the requirements prior to submitting final proposals.

...

From my experience supervising the procurement of several orders of rail cars, I can say that the specification is extremely thorough and well prepared. It addresses all areas of the car design as well as training, documentation, and support in a comprehensive manner that leaves little opportunity for misunderstanding of the Commission's needs and expectations.

With respect to the technical evaluation undertaken by staff, Mr. Keevil has concluded:

...it is my opinion that the technical evaluation process was administered in accordance with the requirements set out in the request for proposal.

(b) Escalation Adjustment Allowance:

In order to mitigate the risk of inflation to the successful bidder's costs for this Contract during the ten (10) year term, an Escalation clause was included, whereby 85% of the 'Total Proposal Price' is subject to adjustment for escalation. The Escalation adjustment is calculated by multiplying the percentage change (whether plus or minus), in a combination of Statistics Canada labour and material Price Indices and US Bureau of Labor Statistics and product Price Indices, between the base month and the month of actual invoicing by the invoiced amount and then multiplying by 85%. The allowance amount for escalation was calculated using an average escalation rate of approximately 3.5% per year over the 10 year term between Notification of Award and entry in to revenue service of the 204<sup>th</sup> LRV.

(c) Foreign Exchange Adjustment Allowance:

In order to mitigate the risk of foreign currency exchange rate variance to both the successful bidder and the Commission, the Contract contains a provision allowing for a one-time adjustment for foreign exchange. The provision provides that the stated amounts of the 'Total Proposal Price' that are to be paid by the successful bidder to its suppliers in a foreign currency will be subject to adjustment for Foreign Currency Exchange Rate Variance between the base rates on the date of proposal submission and the date of Notification of Award. It is calculated by multiplying the percentage difference (whether plus or minus) between the base currency exchange rates on the date that the proposal was submitted and the noon spot rate quoted by the Bank of Canada on the date of the Notification of Award, by the Canadian dollar amounts that are subject to adjustment. Following the unconditional Notification of Award, foreign currency amounts are fixed for the duration of the Contract for the base bid amount identified in recommendation #1. The stated amounts subject to foreign exchange adjustment were utilized to develop an allowance amount.

(d) Spare Parts/Specified Option/Contract Changes Allowance:

As part of the commercial submission requirements the proponents were asked to submit completed recommended spare parts list which will be required to support the startup of operation of the 204 LFLRV fleet. The lists submitted were quite comprehensive and were utilized to develop an allowance amount for spare parts. The proponents were also requested to complete and submit pricing for eight specified options, but pricing of all the specified options was not mandatory and was not to be considered in the evaluation of the proposals, as it was to be considered at a later date. Bombardier submitted pricing on five of the options. The pricing information submitted was utilized to develop an allowance amount for specified options. The allowance amount for potential contract changes is based on approximately 5% of the Total Proposal Price.

As a condition of the Contract, the successful bidder will be required to execute and provide a contract security either in the form of a Performance Bond, Irrevocable Letter of Credit, Parental Guarantee or combination thereof, in amounts ramping up to a maximum amount of 25% of the contract value.

**JUSTIFICATION**

The award of the above contract, for the supply of the new low floor light rail vehicles, is necessary to replace the aging city streetcar fleet as they reach the end of their designed life and to meet the predicted future ridership growth and proposed congestion relief efforts.

Both Bombardier and Siemens submitted compliant bids that met all technical and commercial requirements of the RFP. Bombardier's bid represented the lowest overall price for the base order of 204 LRVs. This procurement is recommended for award to Bombardier Transportation Canada Inc., subject to receipt of funding commitments. This proposal has a bid validity period of 120 calendar days from the bid closing, which expires on June 27, 2009.

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April 15, 2009

9-36-36

Attachment: Appendices A and B

Walter R. Keevil  
1503 Lincoln St.  
Evanston, IL 60201

March 24, 2009

Mr. Gary Webster  
Chief General Manager  
Toronto Transit Commission  
1900 Yonge St.  
Toronto, Ont. M4S 1Z2  
Canada

Dear Mr. Webster,

First, let me thank you and the Commission for your confidence in my experience and knowledge of rail car procurements to give me the opportunity to assist you in the procurement of the new low floor LRVs. It has been a pleasure to work with your staff as the Technical Fairness Monitor during the bid evaluation process. This is an exciting project that will bring a totally new experience to the citizens of Toronto who use the present streetcar network and to those who may have never used streetcars but will use the planned extensions and new lines.

The Structured Multi-Phase Bid Process utilized for this procurement is very similar to the process I have used in my role as Chief Rail Equipment Engineer at Chicago Transit Authority for several purchases of new subway cars. In my over 40 years of experience, using this process, or a variant, produces proposals/bids that are the easiest to evaluate and the least likely to cause a dispute or protest. The process put in place by the Commission guaranteed that the bidders had full knowledge of the technical and commercial requirements and had ample opportunity to discuss and clarify all aspects of the requirements prior to submitting final proposals.

Before attending the technical evaluation meetings, I was able to review the technical specification and the bid evaluation process. From my experience supervising the procurement of several orders of rail cars, I can say that the specification is extremely thorough and well prepared. It addresses all areas of the car design as well as training, documentation and support in a comprehensive manner that leaves little opportunity for misunderstanding of the Commission's needs and expectations.

During my meetings with the bid evaluation group and my attendance at evaluation meetings the members of the group have demonstrated to me their knowledge of the specification requirements, the justification for each of the specification requirements. In addition, I had discussions with TTC staff to review several specific aspects of the proposal documents and the relation between the proposal and the specification requirements. These discussions confirmed that the evaluation of the technical proposal was done in a thorough and fully professional manner.

Therefore, based on my knowledge of the technical specification for the low floor light rail vehicles, the technical evaluation process established by the Commission and on my attendance at technical evaluation meetings and discussions and interviews with TTC staff over the course of several days and my review of the Information Submission Requirements (Appendix A-Documents 00100) and the Technical Proposal Evaluation document, it is my opinion that the technical evaluation process was administered in accordance with the requirements set out in the request for proposal.

Very truly yours,

ORIGINAL SIGNED BY WALTER KEEVIL

Walter R. Keevil  
Technical Fairness Monitor

**Coulter A. Osborne**

*Email: coulterosborne@mac.com*

April 21, 2009

Michael Atlas  
Toronto Transit Commission  
1835 Yonge Street, 4<sup>th</sup> Floor  
Toronto, Ontario  
M4S 1X8

Dear Mr. Atlas:

**Re: Low Floor Light Rail Vehicles RFP**

I was first retained as Fairness Monitor for this Project on March 3/08. In the evaluation process that followed, the submissions of the 2 proponents that responded to the RFP were declared non-compliant. That aspect of the matter was the subject matter of my report to you on August 22/08.

In the circumstances, the TTC issued a new RFP after lengthy consultation with potential proponents that need not be detailed here.

Effective January 16/09, I was retained as Fairness Monitor in respect of the evaluation of proponents' commercial submissions in response to that RFP.

Two proponents responded to the RFP. They are Siemens Canada Limited ("Siemens") and Bombardier Transportation Canada Inc. ("Bombardier").

On preliminary review both the Siemens and Bombardier submissions were found to be compliant with this RFP.

The terms of the RFP to which both Siemens and Bombardier responded control the evaluation process. I have reviewed the RFP, and particularly its evaluation provisions as related to the commercial (non-technical) elements of the proposals of the 2 proponents. On March 20/09, I attended an evaluation meeting (Commercial) at the TTC offices, 5160 Yonge St. The evaluation concerned only the Commercial submissions of both proponents.

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<b>Coulter A. Osborne</b>
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Appendix A to the RFP sets out the required proposal documentation. In summary, in addition to the completed Form of Proposal, these documents include:

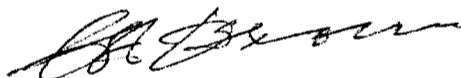
- a price schedule;
- a completed maintenance/spare parts list;
- a completed recommended (capital) spare parts list;
- if applicable, a completed Specified Options List;
- a detailed plan showing how the proponent proposes to meet the 25% Canadian content requirement, averaged over the term of the Contract.

The documentation requirements of the RFP were satisfied by both proponents and I am satisfied that the commercial submissions of both Bombardier and Siemens were evaluated fairly and in a manner consistent with the evaluation provisions of the RFP. Put another way, the evaluation process did not provide either proponent with an advantage or expose either proponent to a disadvantage derived from the evaluation process. I am also satisfied that the RFP itself is a neutral document in the sense that its contents provide neither proponent with an advantage or expose either proponent to a disadvantage.

As I noted in my report of August 22/08, the RFP is the controlling document. Its evaluation provisions must, in fairness to both proponents, be followed. In my opinion, all the provisions of the RFP relevant to the parties commercial submissions were followed in the evaluation process and, as I have said, the evaluation process itself was conducted fairly.

If anything further is required, please let me know. I am forwarding this letter electronically, with a hard copy to follow.

Yours very truly,



Coulter A. Osborne

CAO:cl