INFORMATION REPORT

TO:	Mayor and Members Committee of the Whole
COMMITTEE DATE:	June 3, 2020
SUBJECT/REPORT NO:	Metrolinx Transit Procurement Initiative Participation (PW20033) (City Wide) **Outstanding Business List Item**
WARD(S) AFFECTED:	City Wide
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COUNCIL DIRECTION

On August 15, 2019, Council approved the Motion (Item (g)(i) in Report 19-011) for staff to report on the quantitative and qualitative benefits as well as the deficiencies/ shortcomings of participating in the Metrolinx Transit Procurement Initiative.

INFORMATION

The Metrolinx Transit Procurement Initiative (TPI) is one of the largest joint transit procurement programs in North America. TPI was initiated in 2006 through the Ministry of Transportation of Ontario and transferred to Metrolinx in 2008. The program was designed to assist municipal transit authorities in Ontario save on costs such as joint bus fleet procurement.

Since 2008 New Flyer Industries and Nova Bus, Division of Volvo Group Canada Inc are the only 2 certified bus manufacturers approved to sell both diesel and compressed natural gas (CNG) 40ft and 60ft public transit vehicles in Canada.

City of Hamilton's TPI Contract: Purchases and Market Conditions

With Council's approval, the Hamilton Street Railway (HSR) joined the voluntary TPI program in 2008 in order to purchase buses. HSR has continued to purchase buses

under subsequent Metrolinx-led tenders. The 2014 to 2017 TPI contract was awarded to Nova Bus. Through this contract HSR purchased 56 replacement buses and 41 expansion buses for a total of 97 40-foot CNG buses.

The City of Hamilton requested and was granted a one month extension to the 2014 to 2017 TPI contract (from March 31st, 2017 to April 30th, 2017). With Council approval, HSR leveraged the federal government's Public Transit Infrastructure Fund (PTIF) and through the extended TPI contract purchased 16 expansion 40-foot CNG powered buses thereby avoiding costs by $3M.

The City of Hamilton did not purchase any vehicles in the most recent TPI contract for 2017 to 2020 which expired on March 31st, 2020. This procurement included two vendors, New Flyer and Nova, and was awarded to Nova Bus. Since 2008 increases to the cost of buses through the TPI contracts have been in the range of 3 to 4% resulting from increases due to Consumer Price Index (CPI) and Product Price Increases (PPI). It is noteworthy that bus prices in the 2017 to 2020 TPI contract were as much as 25% higher than the previous contracts. While speculative, the higher price may in part be driven by the presence of PTIF as a potential funding source; successful transit agency applicants to PTIF would have additional funds to support fleet expansion. As such, TPI bidders may perceive that the market in general could bear a higher price point.

The upcoming TPI contract is for 2020 to 2024. The Request for Proposal (RFP) has not been released. Similar to the previous contract period, there is a grant program available to public transit agencies – the Investing in Canada Infrastructure Program (ICIP, formerly PTIF) – which is funded by the federal government, and provinces and territories. It is possible that the knowledge of the funding program may be a cue for bidders to escalate prices in the TPI contract. If prices escalate in the new TPI contract, as they did in the previous contract, the prices will simply reflect general market conditions. When the HSR purchased buses outside the scope of the TPI (i.e.: the TPI did not list the required vehicle type, and Council approved a Policy 11 purchase of 60-foot CNG powered buses), the price increase was also 25%.

Quantitative Factors: Assessment of Benefits and Deficiencies

To date, participation in the TPI program has been voluntary and free, with the quantitative benefit of Transit avoiding a dedicated FTE to develop specifications, construct the RFP, participate in the procurement process and manage the contract as required; the savings are estimated at $120 K per annum, in addition to saving staff time in Corporate Services (e.g.: Procurement and Legal). As a result, HSR staff time is freed to focus on core duties.

In the future, it's possible that the TPI program may introduce a nominal participation fee. In the spirit of keeping joint bus purchases affordable for local transit agencies, it's

estimated that any participation fee will be less than the cost of an FTE, in order to maintain a net financial benefit to participating agencies in staffing costs alone.

Identifying an overall number to express the total quantitative benefits of participating in the TPI is difficult. In order to estimate purchase price savings, there would need to be comparable stand-alone RFPs that also adjust for individual agency customizations which is not possible. Nevertheless, it is generally accepted by members of the TPI consortium that joint purchases increase economies of scale and lower unit costs to fair market pricing. The quantitative benefits and deficiencies of the TPI program are summarized in the Chart 1 below.

Chart 1: Quantitative Benefits and Deficiencies of Participating in the TPI

Factor	Benefits (Pros)	Deficiencies (Cons)
Cost	Zero cost to participate. Cost savings based on economies of scale from consortium buying volumes to achieve a market average cost, or fair market pricing reflecting market conditions.	Nominal participation fee may be introduced in the future. However, there will still be a net savings for agencies to participate.
Staff Time	Reduces the amount of transit, procurement and legal staff time required to prepare, award, and manage the contract. Savings of at least one FTE in Transit, estimated at $120 K per annum. Staff time is freed to focus on core competencies.	Occasional travel to attend meetings.
Efficiency	Reduces the number of procurement and contract related activities through coordination and pooling.	None

Qualitative Factors: Assessment of Benefits and Deficiencies

In addition to quantitative factors, there are also qualitative factors to consider.

One major benefit of the TPI is leveraging industry expertise. Instead of a dedicated FTE within the City of Hamilton's Transit Division, there are experienced TPI staff experts to develop detailed technical specifications, develop the RFP, manage the procurement process, and award the contract. In addition, there is an evaluation committee made up of senior transit participants that pool industry knowledge. Metrolinx also provides inspections of buses during the manufacturing process which increases the level of quality control on the product build.

Another benefit of the TPI is enhanced warranty and contract terms. The consortium's purchasing influence results in more favourable warranties, performance specification standards, and contract terms. In addition, there are specialists dedicated to ensure adherence to the contract, advocate for repairs and provide better contract issue resolution. It is important to note that buses are relatively similar from a manufacturing

standpoint and there are common issues that need to be resolved. The two main portions of a bus provided directly from the manufacturer are the body and the chassis. The bulk of component parts are sourced from various vendors to create the finished product. There is a substantial amount of common parts used by bus manufacturers and all buses sold in Canada must meet the Canadian Motor Vehicle Safety Standard (CMVSS). There have been issues with the build quality and failures with all buses purchased by HSR over the last 20+ years. Regardless of the bus manufacturer, there are expected issues which are resolved post-delivery. This is typical in the manufacturing process of heavy, essentially custom built, vehicles. Buses are built to the specification outlined in the Metrolinx tender and then adjusted to meet the needs of the specific transit agency. Once the TPI contract has been awarded, the winning vendor creates a schedule and then works with each transit agency to accommodate individual requirements. Even with the aforementioned additional Metrolinx quality control measures provided during inspection, there are issues that appear and must be resolved while the bus is under warranty. The issues can range from relatively small problems, to larger, potentially serious, or “coach down” issues. In all these situations, Metrolinx advocates for the repairs for all members of the consortium, as well as advocating for any other infractions of the contract, which ensures contract and warranty compliance.

Next, entering the agreement is voluntary and transit agencies have voting authority on the evaluation criteria and the award process. The joint procurement process requires consensus among participating transit agencies within the procurement processes and timelines. Transit agencies have discretion over vehicle purchases once they join the TPI consortium.

The TPI contract is awarded based on the highest technical specifications at the lowest bid, which is a common practice. Historically, the Metrolinx RFP did not differentiate by bus power source type – there was one bid regardless of the power source (or propulsion system) type. As a result, the structure of the RFP was biased towards diesel-powered vehicles, which have a lower unit cost. In the last decade, HSR has purchased buses powered by both diesel and natural gas (or CNG), through the TPI. In 2013, Council approved the return to CNG as the primary power source for all HSR bus purchases based on environmental concerns and volatile diesel fuel prices at the time. The HSR currently operates 51% (or 137 buses of the 267 bus fleet) on CNG. The majority of the other transit agencies in the TPI purchase buses that use diesel power, so the structure of the RFP and bias to diesel did not impact them. It is significant to note that in the upcoming TPI, the RFP will have both a technical evaluation for the bus, and a separate evaluation for the power source type, which will allow agencies to select the lowest price by power source type (e.g.: diesel, hybrid or natural gas).

The qualitative benefits and deficiencies of the TPI program are summarized in the Chart 2 below.

Chart 2: Qualitative Benefits and Deficiencies of Participating in the TPI

Factor	Benefits (Pros)	Deficiencies (Cons)
Expertise and Quality Control	Experienced TPI staff oversee the RFP end-to-end. Evaluation committee of senior transit agency talent. Metrolinx inspects buses during the manufacturing process increasing quality control.	None
Warranty and Contract terms	Enhanced product warranties, vehicle performance specifications, and contract terms. Ensure adherence to contract, advocates for repairs and provides better contract issue resolution.	Terms may be perceived as increased risk to bus supplier.
Control and Influence	Voluntary participation; transit agencies have voting authority on evaluation criteria, award and vehicle purchases. Participating transit agencies are required to reach consensus with joint procurement processes and timelines.	With consensus, there is some relinquishing of individual agency control.
Structure of RFP	Award is based on highest technical specs and lowest price bid which is a common practice.	Award process has been biased towards diesel-powered buses (lower price); HSR primarily favours natural gas for environmental reasons and diesel cost fluctuations. However, **the upcoming RFP will remedy the bias** by stating lowest pricing differentiated by power source type: diesel; hybrid; and natural gas.

Neutral Factors

Metrolinx TPI RFPs are posted publicly on the MERX system and are open to bidders around the world. To date, only Canadian/USA based companies have submitted bids. In the most recent awards, bids were received from Nova Bus and New Flyer Industries. There are other international bus builders – e.g.: Van Hool (Belgium), Marco Polo (Brazil), Gillig (USA) – that have not submitted bids on Metrolinx RFPs. Recently loosened restrictions on Canadian content for vehicle procurement due to the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) may influence international bidding activity; the Ontario Ministry of Transportation's Canadian Content Transit Vehicle Procurement Policy now requires municipalities procuring transit vehicles with provincial funding to apply a Canadian Content of no more than 25%. That said, higher shipping and parts costs likely deter international bidding in general. From a benefit versus short-coming standpoint, the lack of international bidding is likely a neutral factor; the TPI bidding process is open to all.

It is important to note that there do not appear to be any deficiencies related to the specific manufacturers sourced through the TPI. In order to maintain and manage the bus fleet, HSR continues to analyse bus fleet performance on a monthly basis, including service road calls and work orders. There are natural variations between series and over time, which make “apple to apple” comparisons difficult or impossible. For example, HSR does not have 40-foot CNG buses, built in the same year, from both Canadian manufacturers. In order to assess performance, HSR compares the operating cost of the 40-foot CNG fleet to the rest of the 40-foot buses in service. In this example, parts, labour, fuel and overall operating costs for the 40-foot CNG buses have remained within an average range.

Furthermore, any performance issues are flagged, reviewed and can be resolved through the TPI contract if necessary. For example, the initial 40-foot CNG buses experienced issues within a typical range (for any manufacturer or series), and the issues have largely been resolved. The 40-foot CNG fleet initially experienced HVAC system issues resulting in hot buses in the summer months, as well as issues with vibrations, steering balancing (in which the operator feels the bus pull slightly to one side) and “stiff rides” (in which passengers feel the road surface to a greater extent). There was a lengthy service update to the HVAC systems on the early 40-foot CNG series of buses which was completed in 2019, and HVAC campaign updates to the later series buses were completed during the summer of 2019. Vibrations were improved by operator ride-height adjustments and steering balancing issues were improved through a balancing valve. Certain severe road conditions were found to pronounce differing and/or outlier experiences due to bus design (i.e.; shorter wheel base) resulting in a “stiffer” ride. In the end, all performance issues continue to be monitored by HSR to ensure a normal range of performance.

Conclusion

Overall, there is a net benefit to participating in the Metrolinx TPI from both a quantitative and qualitative standpoint. The TPI program is voluntary and has saved the City of Hamilton time and money, in addition to enjoying other benefits.

While we have heard from both operators and passengers that different vehicles have better or worse performance than others, the data available in our system relative to maintenance and repair illustrates that the difference between vehicles relative to general performance and quality is similar. The 2014 TPI term did result in the addition of a new manufacturer to the HSR fleet, problems experienced with these new models have been addressed and have not been outside industry norms.

Purchasing quality buses at the best possible price is key to balancing taxpayer and customer satisfaction and is a vital part of HSR’s 10 Year Local Transit Strategy.

APPENDICES AND SCHEDULES ATTACHED

N/A