



### 538-2022 ADDENDUM 3

#### SUPPLY AND DELIVERY OF HEAVY-DUTY LOW FLOOR ZERO EMISSION TRANSIT BUSES

### URGENT

**PLEASE FORWARD THIS DOCUMENT TO  
WHOEVER IS IN POSSESSION OF THE  
BID/PROPOSAL**

ISSUED: Oct. 18, 2022  
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**THIS ADDENDUM SHALL BE INCORPORATED  
INTO THE BID/PROPOSAL AND SHALL FORM  
A PART OF THE CONTRACT DOCUMENTS**

Template Version: Add 2021-03-05

**Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid/Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid/Proposal may render your Bid/Proposal non-responsive.**

### PART B – BIDDING PROCEDURES

Revise: B16.4.2 to read: The following sample formula demonstrates the Evaluated Price per item (Items 1 - 4):  
(a)  $[(\text{Unit Price})/(\text{range at nominal conditions as per E2.43}) \times 0.35 + (\text{Unit Price})/(\text{range at worst-case summer conditions as per E2.43}) \times 0.1 + (\text{Unit Price})/(\text{range at worst-case winter conditions as per E2.43}) \times 0.55] \times \text{Number of Units} = \text{Evaluated Price for this item}$

Example: Line item 1 40-ft Battery Electric Bus

Unit Price \$1,200,000.00

Nominal Range 360 km

Worst Case Summer Range 230km

Worst Case Winter Range 280km

$$[(1,200,000.00)/(360) \times 0.35 + (1,200,000.00)/(230) \times 0.10 + (1,200,000.00)/(280) \times 0.55] \times 4 = \$16,182.19$$

### PART D – SUPPLEMENTAL CONDITIONS

- Add: D2.3 (d) (i) Notwithstanding anything else to the contrary contained herein, in the event that a price adjustment is required in respect of changes that are mandatory as a result of legislation or regulations that become effective after the Submission Deadline, such price adjustment shall be negotiated in good faith by the City and the successful Bidder.
- Add: D2.14 All "subject data", including specifications, technical data, records and reports, engineering drawings (including shop drawings and working drawings), manuals and instruction materials and computer or microprocessor software that is delivered or specified to be delivered under the Contract shall remain the property of the Contractor; provided however, the City shall have a royalty-free, non-exclusive, non-transferable and irrevocable license to use such subject data.
- Add: D12.8 Notwithstanding C8.3, while the City is in the possession of the Goods, the City shall assume the risk of loss of the Goods resulting from events within the City's control.

- Add: D12.9: Title to the bus shall pass to the City upon acceptance of the bus by the City, after delivery, in accordance with E3.15.
- Add: D14.7 For certainty, the Contractor shall not be liable for failure to perform any of its obligations under the Contract during any period in which the Contractor cannot perform due to the impact of the COVID-19 pandemic on its operations. The Contractor and City shall work together in a good faith and commercially reasonable manner in an attempt to modify the required obligations if necessary
- Revise: D20.1 to read: Further to C10, payment shall be in accordance with the following payment schedule:  
**a) 20% at Purchase order**  
**b) 40% at Delivery**  
c) 20% at Final Acceptance  
d) 20% upon achieving the thirty (30) - Calendar Day in-service reliability requirement as per D2.13
- Add: D23.1.1 Notwithstanding C11.2.1, If all outstanding defects or deficiencies have not been corrected to the satisfaction of the Contract Administrator by at least two (2) weeks prior to the date on which the warranty would expire except for this C11.2.1, then the subsystem shall have the unexpired warranty period of the original subsystem.
- Revise: D23.5 (a) to read: Propulsion system components, including the traction motor(s), traction motor controller(s), transmission, drive motors, and drive and non-drive axles, shall be warranted to be free from Defects and Related Defects for the standard six (6) years or 480,000 kilometres, whichever comes first.
- Add: D23.5 (c) All other propulsion system-related line replacement components shall be warranted to be free from Defects and Related Defects for two (2) years/unlimited mileage.
- Revise: D23.6 (a) to read: The energy storage system (ESS), including the traction battery and battery management system, shall be warranted to be free from Defects and Related Defects for twelve (12) years or 800,000 kilometers, whichever comes first, beginning on the date of revenue generating service as per this RFP. The ESS shall also be warranted for twelve (12) years or 800,000 kilometres, whichever comes first, to remain within warrantable end of life. The Warrantable End of Life (see definition of Warrantable End of Life in section E2.7) shall be 80% of the ESS original specified energy storage capacity defined by the Proposer.
- Add: D23.6 (d) All other ESS-related line replacement components shall be warranted to be free from Defects and Related Defects for two (2) years/unlimited mileage.
- Revise: D23.7 (a) to read: The fuel cell power module, shall be warranted to be free from Defects and Related Defects for **six (6) years or 480,000 kilometers**, whichever comes first, beginning on the date of acceptance of each bus. The fuel cell power module shall also be warranted for **six (6) years or 480,000 kilometres**, whichever comes first, to maintain power output within 70% of the power plant original specified power output as defined by the Proposer.
- Revise: D23.7 (d) to read: All other fuel cell auxiliary sub-system components, shall be warranted to be free from Defects and Related Defects for **two (2) years**.
- Revise: D23.8 (b) to read: The following subsystems shall be warranted to be free from Defects and Related Defects for **6 years or 480,000 kilometers**, whichever comes first:  
  
(i) Low-voltage and high-voltage electrical wiring and harnesses **(6 years)**
- Revise: D23.21 to read: The City shall be reimbursed by the Contractor for defective parts and for parts that must be replaced to correct the Defect **for the duration of the base bus warranty period as**

**specified in section D23.3 (a) Complete Bus.** The reimbursement shall be at the current price at the time of repair and shall include taxes where applicable, plus fifteen (15) percent handling costs **up to a max of \$100 per claim.**

## **PART E – SPECIFICATIONS**

- Revise: E2.2 (a) to read: Item No. 1 – forty-foot (40') low floor battery electric buses shall be of the accessible “Low Floor” design without steps at the front and rear doors. Buses require a minimum seating capacity of 38 passengers and a minimum total capacity of **65** passengers. Buses must be equipped with the necessary convertible ambulatory seating to create two wheelchair positions at the front of the bus when required.
- Revise: E2.2 (b) to read: Item No. 2 – sixty-foot (60') low floor battery-electric buses shall be of the accessible “Low Floor” design without steps at the front and rear doors. Buses require a minimum seating capacity of 50 passengers and a minimum total capacity of **100** passengers. Buses must be equipped with the necessary convertible ambulatory seating to create two wheelchair positions at the front of the bus when required.
- Revise: E2.3 (a) to read: Item No. 3 - forty-foot (40') low floor fuel cell battery-electric buses shall be of the accessible “Low Floor” design without steps at the front and rear doors. Buses require a minimum seating capacity of 38 passengers and a minimum total capacity of **65** passengers. Buses must be equipped with the necessary convertible ambulatory seating to create two wheelchair positions at the front of the bus when required.
- Revise: E2.3 (b) to read: Item No. 4 – sixty-foot (60') low floor fuel cell battery-electric buses shall be of the accessible “Low Floor” design without steps at the front and rear doors. Buses require a minimum seating capacity of 50 passengers and a minimum total capacity of **100** passengers. Buses must be equipped with the necessary convertible ambulatory seating to create two wheelchair positions at the front of the bus when required.
- Revise: E2.10 to read: **Proprietary Components:**
- (a) Use of components designed to be proprietary components will not be allowed, **unless approved by the City.**
- Revise: E2.42 (a) to read: Operating range of a 40-foot bus when run in the Winnipeg environment on the operating profile reference in E2.43 shall be at least **400** km and 23 hours between fueling with an initial gas-settled pressure of 5000 psi at 21 °C at beginning of life.
- Revise: E2.42 (b) to read: Operating range of the bus must not drop below **240** km and 16 hours between charges when operating in the Winnipeg environment with HVAC running in temperatures between -40° and +40°C
- Revise: E2.43 (f) (i) to read: Ambient Winter Temperature: **-30°C (-22°F)**
- Add: E2.45 (l): The fuel cell propulsion system shall be able to start at -25°C (-13°F) and operate at temperatures between 40°C to -40°C.
- Revise: E2.48 (a) (ii) to read: The ESS shall comply with ECE R100 Revision 2, UN/DOT 38.3, and/or SAE J2464 requirements for lithium batteries. For non-lithium batteries, the ESS shall comply with similar applicable standards. **If certification is not available at the time of submission, evidence of a in-process test or a test plan indicating timeline for completion shall be submitted for approval by the City. If certification is not achieved prior to line entry any design changes or corrective actions to address deficiencies, must be retrofitting on to the proposed buses at no additional cost to the City.**
- Revise: E2.61 (a) to read: All clamps shall be maintenance free, stainless steel, maintain a constant torque, with **Belleville** spring mechanism, expanding and contracting with the line in response to temperature changes and aging of the line material. The lines shall be designed for use

in the environment where they are installed. For example, high-temperature resistant in the engine compartment, resistant to road salts near the road surface, and so on.

- Revise: E2.67 (a) (iii) to read: Tanks will be Type IV and rated at 350 Bar. The tank system will provide **sufficient usable quantity of gas to meet the vehicle ranges specified in E2.42**, and this useable quantity will assume on-board pressure range between a fill of 5,076 psig (temperature corrected to 70 degrees F) down to 200 psig.
- Delete: E2.91 (b)
- Revise: E2.97 (b) to read: The brake and throttle interlock shall prevent movement when the bus is kneeled. The kneeling control shall be disabled when the bus is in motion. The bus shall kneel at a maximum rate of 1.25 **to 2** inches per second at essentially a constant rate. After kneeling, the bus shall rise within **4** seconds to a height permitting the bus to resume service and shall rise to the correct operating height within 7 seconds regardless of load up to GVWR. During the lowering and raising operation, the maximum vertical acceleration shall not exceed 0.2g, and the jerk shall not exceed 0.3g/second.
- Delete: E2.110 (c)
- Revise: E2.120 (d) to read: Battery voltage equalizer must be a minimum Vanner 100 amp with voltage monitor and jump start override. More than one unit may be supplied if load exceeds 100 amp.
- Revise: E2.125 (a) to read: The battery terminal ends and cable ends shall be color-coded with red for the primary positive, black for negative and another color for any intermediate voltage cables. Positive and negative battery cables shall not cross each other if at all possible, shall be flexible and shall be sufficiently long to reach the batteries with the tray in the extended position without stretching or pulling on any connection and shall not lie directly on top of the batteries. Except as interrupted by the master battery switch, battery wiring shall be connected securely by bolted terminals and shall conform to specification requirements of SAE Standard J1127–Type SGR, SGT, SGX or GXL and SAE Recommended Practice J541, with 2100 strand 4/0 cable or greater.
- Delete: E2.126
- Revise: E2.195 (c) to read: With the bus running at the design operating profile with corresponding door opening cycle, and carrying a number of passengers equal to 150 percent of the seated load, the HVAC system shall control the average passenger compartment temperature within a range between 65 and **80 °F**, while maintaining the relative humidity to a value of 50 percent or less. The system shall maintain these conditions while subjected to any outside ambient temperatures within a range of 10 to 95 °F and at any ambient relative humidity levels between 5 and 50 percent. Demonstrate this requirement after first reaching a stabilized interior temperature of 70 ±3 °F with full passenger and solar load.
- Revise: E2.197 (b) to read: The auxiliary heating unit shall be suitable for 40' buses and for 60' buses. A J1939 Diagnostic connector **may be utilized if equipped**.
- Delete: E2.198
- Revise: E2.294 (b) to read: Front Door Location of Loading System, Flip-Out Design Ramp with 6:1 **to 7:1** Slope:
- (i) The wheelchair loading system shall be located at the front door, with the ramp being of a simple hinged, flip-out type design being capable of deploying to the ground at a maximum 6:1 **to 7:1** slope.
- Revise: E3.19 (e) to read: After acceptance, vehicle reliability must be demonstrated by thirty (30) Calendar Days of continue operation in revenue service without loss service day(s) due to warrantable issue **of a Major Subsystem (Propulsion, ESS, HVAC and Frame/Structural systems)**. If the bus experiences an in-service failure as a result of a warrantable defect during these first 30 days, the clock resets until 30 consecutive days of no defects is

achieved. The City shall notify the Contractor when each bus successfully completes this reliability milestone.

## **DRAWINGS**

Replace: 538-2022 Drawing 40ft Bus Paint Scheme-R01 with **538-2022 Drawing 40ft Bus Paint Scheme-R02**

Replace: 538-2022 Drawing 60ft Bus Paint Scheme-R01 with **538-2022 Drawing 60ft Bus Paint Scheme-R02**