

## REQUEST FOR PROPOSAL **DEMANDE DE PROPOSITION**

**Proposal To: Transport Canada** 

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods and services listed herein and on any attached sheets at the price(s) set out therefore.

Proposition à : Transports Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens et services énumérés ici et sur toute feuille ci-annexée, au(x) prix indique(s).

**Comments - Commentaires** 

#### **RETURN BIDS TO: RETOURNER LES SOUMISSIONS À :**

By e-mail to: - Par courriel au: Cory.lajoie@tc.gc.ca

Attention: - Attention: Cory Lajoie

Solicitation Closes - L'invitation prend fin

At - à

2:00 PM - 14:00

On - le ·

November 20, 2023

Time Zone - Fuseau Horaire:

CST

Title - Sujet

Zero Emission Trucking Testbed

Solicitation No. N° de l'invitation T8080-230265

**Date of Solicitation** Date de l'invitation

October 20, 2023

Address enquiries to: - Adresser toute demande de renseignements à :

Cory Lajoie

Telephone No. - N° de telephone E-Mail Address - Courriel

204-228-2267 Cory.lajoie@tc.gc.ca

Destination

See herein - Voir aux présentes

Instructions: Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

Instructions: Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.

**Delivery required** Livraison exigée

**Delivery offered** Livraison proposée

See herein - Voir aux présentes

Not applicable - Sans objet

**Vendor/Firm Name and Address** 

Raison sociale et adresse du fournisseur/de l'entrepreneur

Person authorized to sign on behalf of Vendor/Firm (type or print): La personne autorisée à signer au nom du fournisseur/de l'entrepreneur (taper ou écrire en caractères d'imprimerie) :

Name - Nom Title - Titre

Signature **Date** 



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#### PART 1 - GENERAL INFORMATION

#### 1.1 Introduction

- A. The bid solicitation is divided into seven parts plus attachments and annexes, as follows:
  - Part 1 General Information: provides a general description of the requirement;
  - Part 2 Bidder Instructions: provides the instructions, clauses, and conditions applicable to the bid solicitation:
  - Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
  - Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
  - Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
  - Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
  - Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

### 1.2 Summary

## 1.2.1 Description

A. Transport Canada has a requirement for professional services for project coordination and testing of zero emission freight-hauling truck technology in real world commercial operation in Canada.

Transport Canada has already established a project to test battery electric freight-hauling trucks operating in the province of Quebec. To expand on this testing, new projects must include hydrogen powertrain technologies or, if only battery electric vehicles are included, the projects must be located entirely or partially in jurisdictions other than Quebec. Transport Canada will be issuing up to two (2) contracts.

## 1.3 Debriefings

A. Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

#### **PART 2 - BIDDER INSTRUCTIONS**

### 2.1 Standard Instructions, Clauses, and Conditions

- A. All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the <u>Standard Acquisition Clauses and Conditions Manual</u> (<a href="https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual">https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual</a>) issued by Public Works and Government Services Canada.
- B. Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.
- C. The <u>2003</u> (2023-06-08), Standard Instructions Goods or Services Competitive Requirements, are incorporated by reference into and form part of the bid solicitation, with the following modification(s):
  - (i) Section 01, Integrity provisions bid, subsection 3., paragraph a., is deleted in its entirety and replaced with the following:
    - a. at the time of submitting an arrangement under the Request for Supply Arrangements (RFSA), the Bidder has already provided a list of names, as requested under the <a href="Ineligibility and Suspension Policy">Ineligibility and Suspension Policy</a> (<a href="http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html">http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html</a>). During this procurement process, the Bidder must immediately inform Canada in writing of any changes affecting the list of names.
  - (ii) Section 05, Submission of bids, subsection 2, paragraph d., is deleted in its entirety and replaced with the following:
    - d. send its bid only to the Transport Canada location specified on page 1 of the bid solicitation;
  - (ii) Section 05, Submission of bids, subsection 4, is amended as follows:

Delete: 60 days Insert: 120 days

(iv) Section 06, Late bids, is deleted in its entirety and replaced with the following:

Transport Canada will not return any bids delivered after the stipulated solicitation closing date and time, unless they qualify as a delayed bid as described in section 07.

For bids submitted electronically, the late bids will be deleted. Late paper bids will be disposed of in accordance with Transport Canada document management policies.

### 2.2 Submission of Bids

A. Bids must be submitted only to Transport Canada by the date, time, and place indicated on page 1 of the bid solicitation.

## 2.2.1 Transmission by E-mail

A. Individual e-mails that may include certain scripts, formats, embedded macros, and/or links, or those that exceed 10 megabytes may be rejected by Canada's e-mail system and/or firewall(s) without notice to the Bidder or Contracting Authority. Larger bids may be submitted through more than one e-mail. Canada will confirm receipt of documents. It is the Bidder's responsibility to ensure that their entire submission has been received. Bidders should not assume that all documents have been received unless Canada confirms receipt of each document. In order to minimize the potential for technical issues, bidders are requested to allow sufficient time before the closing date and time to confirm receipt. Bid documents submitted after the closing time and date will not be accepted.

### 2.3 Maximum Funding

The maximum funding available for each Contract resulting from the bid solicitation is \$ 3,000,000 (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

#### 2.4 Former Public Servant

A. Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

#### 2.4.1 Definitions

- A. For the purposes of this clause:
  - (i) "Former public servant" is any former member of a department as defined in the <u>Financial Administration Act</u> (<a href="http://laws-lois.justice.gc.ca/eng/acts/f-11/">http://laws-lois.justice.gc.ca/eng/acts/f-11/</a>), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:
    - (a) An individual;
    - (b) An individual who has incorporated;
    - (c) A partnership made of former public servants; or
    - (d) A sole proprietorship or entity where the affected individual has a controlling or major interest in the entity;
  - (ii) "Lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner; and
  - (iii) "Pension" means a pension or annual allowance paid under the <u>Public Service Superannuation Act</u> (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the <u>Supplementary Retirement</u> <u>Benefits Act</u>, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the <u>Canadian Forces Superannuation Act</u>, R.S., 1985, c. C-17, the <u>Defence Services Pension Continuation Act</u>, 1970, c. D-3, the <u>Royal Canadian Mounted Police Pension Continuation Act</u>, 1970, c. R-10, and the <u>Royal Canadian Mounted Police Superannuation Act</u>, R.S., 1985, c. R-11, the <u>Members of Parliament Retiring Allowances Act</u>, R.S. 1985, c. M-5, and that portion of pension payable to the <u>Canada Pension Plan Act</u>, R.S., 1985, c. C-8.

## 2.4.2 Former Public Servant in Receipt of a Pension

A.	As per	the above definitions, is the Bidder a FPS in receipt of a pension?
	( )	Yes
	( )	No

B. If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- (i) Name of former public servant; and
- (ii) Date of termination of employment or retirement from the Public Service.
- C. By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with <a href="Contracting Policy Notice: 2019-01">Contracting Policy Notice: 2019-01</a> (<a href="https://www.canada.ca/en/treasury-board-secretariat/services/policy-notice/changes-contracting-limits-approval-new-requirements.html">https://www.canada.ca/en/treasury-board-secretariat/services/policy-notice/changes-contracting-limits-approval-new-requirements.html</a>) and the <a href="Guidelines on the Proactive Disclosure of Contracts">Guidelines on the Proactive Disclosure of Contracts</a> (<a href="https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14676&section=text">https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14676&section=text</a>).

### 2.4.3 Work Force Adjustment Directive

Α.			didder a FPS who received a lump sum payment pursuant to the terms of the Work Force nent Directive?
	(	)	Yes
	(	)	No

- B. If so, the Bidder must provide the following information:
  - (i) Name of former public servant;
  - (ii) Conditions of the lump sum payment incentive;
  - (iii) Date of termination of employment;
  - (iv) Amount of lump sum payment;
  - (v) Rate of pay on which lump sum payment is based;
  - (vi) Period of lump sum payment including start date, end date and number of weeks; and
  - (vii) Number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

## 2.5 Enquiries - Bid Solicitation

- A. All enquiries must be submitted in writing to the Contracting Authority no later than 7 calendar days before the bid closing date. Enquiries received after that time may not be answered.
- B. Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

## 2.6 Applicable Laws

- A. Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.
- B. Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory

specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

## 2.7 Basis for Canada's Ownership of Intellectual Property

- A. Transport Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons, as set out in the <a href="Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts">Procurement Contracts</a> (http://www.ic.gc.ca/eic/site/068.nsf/eng/00005.html):
  - (a) The main purpose of the Contract, or of the deliverables contracted for, is to generate knowledge and information for public dissemination.

## 2.8 Bid Challenge and Recourse Mechanisms

- A. Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- B. Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's <a href="Buy and Sell">Buy and Sell</a> (<a href="https://buyandsell.gc.ca/">https://buyandsell.gc.ca/</a>) website, under the heading "<a href="https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/bid-follow-up/bid-challenge-and-recourse-mechanisms">https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/bid-follow-up/bid-challenge-and-recourse-mechanisms</a>) contains information on potential complaint bodies such as:
  - (i) The Office of the Procurement Ombudsman (OPO) was established by the Government of Canada to provide an impartial, independent venue for Canadian bidders to raise complaints regarding the award of certain federal contracts under \$26,400 for goods and \$105,700 for services. If you have concerns regarding the award of a federal contract below these dollar amounts, you may contact OPO by e-mail at <a href="mailto:boa.opo@boa-opo.gc.ca">boa.opo@boa-opo.gc.ca</a>, by telephone at 1-866-734-5169, or by web at <a href="www.opo-boa.gc.ca">www.opo-boa.gc.ca</a>. For more information on OPO's services or to determine if your concerns are within the Ombudsman's mandate, please see the <a href="Procurement Ombudsman Regulations">Procurement Ombudsman Regulations</a> (<a href="https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-143/page-1.html">https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-143/page-1.html</a>) or visit the <a href="OPO">OPO</a> <a href="https://website">website</a>; and
  - (ii) Canadian International Trade Tribunal (CITT).
- C. Suppliers should note that there are strict deadlines for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

#### **PART 3 - BID PREPARATION INSTRUCTIONS**

### 3.1 Bid Preparation Instructions

A. The bid must be gathered per section and separated as follows:

Section I: Technical Bid;

Section II: Financial Bid;

Section III: Certifications; and

Section IV: Additional Information.

- B. Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.
- C. It is recommended that all electronic documents be submitted using PDF file format.
- D. Canada requests that bidders follow the format instructions described below in the preparation of their bid:
  - (i) use 8.5 x 11-inch (216 mm x 279 mm) page size; and
  - (ii) use a numbering system that corresponds to the bid solicitation.
- E. In accordance with the Treasury Board *Contracting Policy* and the *Accessible Canada Act*, federal departments and agencies must consider accessibility criteria and features when procuring goods or services. Therefore, bidders are encouraged to highlight all the accessibility features and components of their proposal for this Statement of Work (SOW) and must, if applicable:
  - (i) Demonstrate how the bidder's proposed goods and/or services meet the accessibility requirement at delivery; or
  - (ii) Describe how the bidder would deliver its goods and/or services under any resulting contract in a way that satisfies the mandatory requirement.

#### 3.2 Section I: Technical Bid

- A. In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise, and clear manner for carrying out the work.
- B. The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

## 3.3 Section II: Financial Bid

A. Bidders must submit their financial bid in accordance with the Attachment to Part 3 titled "Pricing Schedule".

#### 3.3.1 Electronic Payment of Invoices - Bid

A. If you are willing to accept payment of invoices by Electronic Payment Instruments, complete the attachment titled "Electronic Payment Instruments", to identify which ones are accepted.

- B. If the attachment titled "Electronic Payment Instruments" is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.
- C. Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

## 3.3.2 Exchange Rate Fluctuation

A. C3011T (2013-11-06), Exchange Rate Fluctuation

#### 3.4 Section III: Certifications

A. Bidders must submit the certifications and additional information required under Part 5.

### 3.5 Section IV: Additional Information

- A. In Section IV of their bid, bidders should provide:
  - (i) A completed, signed, and dated Page 1 of this solicitation or final solicitation amendment;
  - (ii) The name of the contact person (provide also this person's title, mailing address, phone number, and e-mail address) authorized by the Bidder to enter into communications with Canada with regards to their bid, and any contract that may result from their bid;
  - (iii) Any other information submitted in the bid not already detailed.

#### ATTACHMENT 1 TO PART 3 - PRICING SCHEDULE

#### 1. General

- A. Bidders are requested to complete the following Pricing Schedule and include it in the bid. At a minimum, the Firm Price or Rate for each Item must be submitted.
- B. All prices and costs must be submitted in Canadian Dollars, Canadian customs duties and excise taxes included, Delivered Duty Paid (DDP), Applicable Taxes excluded.
- C. The estimated level of effort has been provided to Bidders to assist them in preparing their bids. The inclusion of this data in this bid solicitation does not represent a commitment by Canada that Canada's future usage of the service identified in this bid solicitation will be consistent with this data. It is provided purely for information purposes.
- D. Travel and living expenses will not be reimbursed and must be included in the costs below.

#### 2. Period of the Contract

Contract Award to 2026-12-15

#### 3.0 Financial Evaluation

#### 3.1 Financial Bid Presentation Sheet

- A. The combined price of items #16 to #22 must be at least 60% of the total project price.
- B. The value for item #16 is total cost for the on-road pilot, which will not be less than 24,000 km with no maximum. The total cost will be taken from the bidder's presentation sheet and the cost will be divided into 8 milestones of 12.5% km each in Annex B Basis of Payment Milestones 16.1 to 16.8.
- C. The cost per km will be determined by taking the total cost and dividing by total road pilot km for item #16.

Item	Task	Deliverable / Milestone	SoW Section	Format	Timeline (Contract Award + "#" Months)	Mandatory Minimum	Firm All-Inclusive Price (taxes excluded)
		Task Group 1:	Project Go	vernance			
1	1.1	Virtual kick-off meeting with TC. Meeting minutes to be provided to TC.	6	MS Word	0.25	N/A	N/A
2	1.2	Bi-weekly virtual progress meetings with the project team. Meeting minutes to be provided to TC.	6	MS Word	Bi-weekly throughout the project	N/A	N/A
Та	Task Group 2: Pilot Test Planning and Stakeholder Workshop						
3	2.1	Draft agenda, participant list, presentation deck, and participant survey for the	5.5	MS Word	2	N/A	\$

		Stakeholder					
		Engagement					
4	2.2	Workshop Draft test plan for on-road pilot	5.4	MS Word	2	N/A	\$
5	2.3	resting  Final agenda, participant list, presentation deck and participant survey for the Stakeholder Engagement Workshop, addressing TC feedback	5.5	PDF	10	N/A	\$
6	2.4	Stakeholder Engagement Workshop to present the test plan and receive feedback. Workshop presentation decks and a summary of participation and feedback (including workshop survey results) will be provided to TC.	5.5	PDF	10	N/A	\$
7	2.5	Licensing, Permitting, Insurance, Approvals, Exemptions etc.	5.2, 5.3	PDF	10	N/A	\$
8	2.6	Provide zero emission truck(s), comparable conventional truck, and charging/fueling for technical orientation, training, and on- road pilot testing.	5.2	N/A	10	Must be at least 10% of total bid price	\$
9	2.7	Final test plan for on-road pilot testing, addressing TC feedback.	5.4	PDF	12	N/A	\$
		Task Group 3:	Technical (	Orientation	and Training		
		Tuon Group of	Johnnoul		aag		

		Droft agendes					T.
10	3.1	Draft agendas, participant lists, training curricula and participant surveys for technical orientation and training sessions	5.6	Word	7	N/A	\$
11	3.2	Final agendas, participant lists, training curricula and participant surveys for technical orientation and training sessions, addressing TC feedback.	5.6	PDF	8	N/A	\$
12	3.3	Conduct technical orientation to zero emission trucking technology for safety regulators and key stakeholders (summary provided to TC)	5.6	PDF	13	N/A	\$
13	3.4	Conduct training for drivers, maintenance staff, and other fleet staff (summary provided to TC)	5.6	PDF	13	N/A	\$
14	3.5	Conduct training for first responders (summary provided to TC)	5.6	PDF	13	N/A	\$
		Task Gro	up 4: On-l	Road Pilot 1	Гesting		
15	4.1	Go/no-go meeting with the Project Team at least (1) week after delivery of the final pilot test plan. On-road pilot testing will only commence if the decision is "Go".	5.7	-	15	N/A	\$
16	4.2	Execute the on- road pilot testing, including weekly data summary	5.7	MS Word	27	N/A	Total Road Pilot km

		reports and					Total Road Pilot Cost
		preliminary					\$
17	4.3	analysis.  Draft Report on on-road testing including results and analysis (for TC review and comments).	5.8	MS Word	29	N/A	\$
18	4.4	Final Report on on-road testing addressing TC feedback.	5.8	PDF and MS Word	30	Must be at least 10% of total bid price	\$
		Task Group 5:			orkshop and		
		Wrap-up Tasks:	Project C	lose-Out			
19	5.1	Vehicle export if applicable, decommissioning charging/fueling infrastructure if applicable.	5.7	PDF	30	N/A	\$
20	5.2	Draft agenda, participant list, presentation deck, and stakeholder survey for the final Stakeholder Engagement Workshop	5.5	MS Word	30	N/A	\$
21	5.3	Final agenda, participant list, presentation deck, and stakeholder survey for the final Stakeholder Engagement Workshop, addressing TC feedback	5.5	PDF	31	N/A	\$
22	5.4	Organize and lead the final Stakeholder Engagement Workshop to present results to key stakeholders. Stakeholder feedback survey results to be provided to TC.	5.5	PDF	32	Must be at least 10% of total bid price	\$

\$ Total Value Items #3 to #14:
\$ Total Value Items #16 to #22:
\$ Evaluated Bid Total:

## 3.2 Financial Evaluation Worksheet

Item #	Mandatory Minimum	Bid Price (Value A)	Bid Grand Total (Value B)	Percentage of Bid Total (A / B = Percentage Value)	Pass or Fail
8	Must be at least 10% of total bid price	\$	\$	%	
18	Must be at least 10% of total bid price	\$	\$	%	
22	Must be at least 10% of total bid price	\$	\$	%	
16 to 22	The combined price must be at least 60% of the total project price.	\$	\$	%	

## 3.3 Cost per km Worksheet

Item #	Road Pilot Cost	Road Pilot km	Cost per km
	(Value A)	(Value B)	(A / B)
#16	\$	km	\$

## ATTACHMENT 2 TO PART 3 - ELECTRONIC PAYMENT INSTRUMENTS

A.	The Bidder accepts to be paid by any of the following Electronic Payment Instrument(s):			
	(	)	VISA Acquisition Card;	
	(	)	MasterCard Acquisition Card;	
	(	)	Direct Deposit (Domestic and International);	
	(	)	Electronic Data Interchange (EDI);	
	(	)	Wire Transfer (International Only); and	
	(	)	Large Value Transfer System (LVTS) (Over \$25M).	

#### PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

#### 4.1 Evaluation Procedures

- A. Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- B. An evaluation team composed of representatives of Canada will evaluate the bids.

#### 4.1.1 Technical Evaluation

A. Mandatory and point rated technical evaluation criteria are included in the Attachment to Part 4 titled "Evaluation Criteria".

#### 4.1.2 Financial Evaluation

- A. The price of the bid will be evaluated as follows:
  - (i) Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Applicable Taxes excluded; and
  - (ii) Foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and Applicable Taxes excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.
- B. Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.
- C. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

#### 4.1.2.1 Mandatory Financial Criteria

A. The maximum funding available for the Contract resulting from the bid solicitation is \$3,000,000 (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

#### 4.2 Basis of Selection - Highest Rated Within Budget

Up to two (2) contracts may be awarded to the bids that meet the following:

- A. To be declared responsive, a bid must:
  - (i) Comply with all the requirements of the bid solicitation;
  - (ii) Meet all mandatory technical evaluation criteria; and
  - (iii) Obtain the required minimum of 138 points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 230 points.
- B. Bids not meeting (i) or (ii) or (iii) will be declared non responsive. The two responsive bids with the highest number of points will be recommended for award of a contract, provided that the total evaluated price does not exceed the budget available for this requirement.
- C. Should two or more responsive bids achieve an identical highest number of points, the two bids with the lowest overall price will be recommended for award of a contract.

#### **ATTACHMENT 1 TO PART 4 - EVALUATION CRITERIA**

"Bidder" means the person or entity (or, in the case of a joint venture, the persons or entities) submitting a bid to perform a contract for goods, services or both. It does not include the parent, subsidiaries or other affiliates of the Bidder, or its subcontractors.

Bidders must write beside each of the criteria the relevant page number(s) from their proposal which address the requirement identified in the criteria.

Where references are required, Bidders should submit the required information with the bid, but may submit it within 48 hours of the Contracting Authority's request.

## **Mandatory Criteria**

The Phased Bid Compliance Process will apply to all mandatory technical criteria.

The bid must meet the mandatory technical criteria specified below. The Bidder must provide the necessary documentation to support compliance with this requirement.

Bids which fail to meet the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

Mandatory Requirements are evaluated on a pass or fail basis. Failure on the part of the Bidder to meet any one (1) of the following Mandatory Requirements will result in the proposal being deemed non-responsive and ineligible for any further consideration or evaluation. It is the responsibility of the Bidder to ensure that the proposal meets all of the Mandatory Requirements as indicated.

#	Mandatory Requirement	Met / Not Met	Proposal Reference		
M1	The Bidder must provide a signed letter of commitment from a Vehicle Original Equipment Manufacturer (OEM) stating that, if the Bidder is awarded the contract, the Vehicle OEM will provide (sell, lease, loan) for pilot testing at least one Class 7 or 8 zero emission heavy-duty freight-hauling truck that has a nominal range of 400 km or higher, and that is developed to a technology-readiness level of at least 7¹, which represents a prototype ready for demonstration in an appropriate operational environment.	Yes No			
M2	If the truck proposed under M1 is powered by a hydrogen fuel cell or 100% hydrogen internal combustion engine: The Bidder must propose a dedicated commercial driving route that is entirely or partially within Canada and is at least 250 km in distance between fueling/charging events.  If the truck(s) proposed under M1 is/are only powered by battery electric propulsion systems: The Bidder must propose a dedicated driving route that is entirely or partially within a Canadian jurisdiction other than Quebec and is at least 250 km in				
М3	distance between charging events.  The Bidder must provide a signed letter of commitment from a charging or hydrogen fueling station provider stating that, if the Bidder is awarded the contract, they will provide access to at least one electric vehicle charger or hydrogen fueling station throughout pilot testing that:  1) is accessible from the proposed dedicated driving route under M2; 2) is compatible with the vehicle provided under M1; and 3) can provide sufficient charging or refueling rates for the proposed commercial operations under M2.				

<sup>1</sup> Technology Readiness Levels defined here: https://www.ic.gc.ca/eic/site/080.nsf/eng/00002.html

#	Mandatory Requirement	Met / Not Met	Proposal Reference	
M4	The Bidder must provide a signed letter of commitment from a Canadian Fleet Operator/Carrier stating that, if the Bidder is awarded the contract, they (the Fleet Operator/Carrier) will integrate the vehicle provided under M1 into their commercial freight-hauling operations on the dedicated driving route proposed under M2. The Canadian Fleet Operator/Carrier must provide evidence of a good commercial carrier safety performance record (e.g. a satisfactory rating according to the National Safety Code for Motor Carriers Standard 14).	Yes No		
M5	The Bidder must propose a project manager assigned to this project who has a minimum of 24 months of demonstrated experience in managing projects of similar or greater cost, duration and complexity. The Bidder must demonstrate compliance by providing brief abstracts of the projects undertaken that clearly demonstrate where, the month and year commenced and completed, and how (through what activities, responsibilities and approach) the proposed project manager successfully completed the projects.  The examples must include references with the following required information:  Name  Duration (mm-yyyy to mm-yyyy)  Phone Number and/or Email			
М6	The Bidder must propose a resource who has a minimum of 24 months of demonstrated experience with instrumentation, data collection, and vehicle telematics relevant to that required for this project (i.e. recording data from onboard vehicle sensors). The Bidder must demonstrate compliance by providing brief abstracts of the projects undertaken that clearly demonstrate where, the month and year commenced and completed, and how (through what activities, responsibilities, and approach) the proposed resource successfully completed the projects.  The examples must include references with the following required information:  Name  Duration (mm-yyyy to mm-yyyy)  Phone Number and/or Email	Yes No		

#### **Point Rated Criteria**

Only bids that meet the mandatory criteria will be subject to point rating. The Technical Bid will be evaluated and scored in accordance with the following evaluation criteria and point rating scale.

For each of the rated evaluation criteria there is a graduated series of statements that describe the level to which the proposal satisfies that criterion. A score is assigned according to the graduated statement that best fits how the proposal addresses the criterion.

Maximum Rated Points Available: 230 points Minimum Overall Pass Mark: 138 points (60%)

Bids which fail to obtain the required minimum number of points specified will be declared non-responsive.

Each point rated technical criterion should be addressed separately and the Bidder should write beside each of the criteria the relevant page number(s) from their proposal which address the requirement identified in the criteria. Point rated criteria not addressed in the Bidder's proposal will result in a score of zero being assigned against the specific criterion.

Criteria	Scoring	Maximum Points	Proposal Cross- Reference
R1-R6. Technical Proposal			
	iled technical proposal that responds to the following crite uest for Proposal and provide input coherent with the obje		
R1. Project plan and schedule  The Bidder's proposal should provide an outlined approach to complete the scope of work described in the Statement of Work section 5.0 Scope. This should include details on:  Schedule, including 12 months of on-road pilot testing and at least 24,000km of mileage accumulation.  Roles and responsibilities of project partners; The stakeholder engagement workshop; Technical orientation and training requirements; Deadlines and milestones; and	(25 points): Bidder's technical proposal includes a detailed project plan and schedule that identifies all the necessary elements and sub-elements at a higher level of detail than is described in the SoW.  (20 points): Bidder's technical proposal includes a detailed project plan and schedule that includes only the necessary elements at a higher level of detail than is described in the SoW.  (15 points): Bidder's technical proposal includes a project plan and schedule that includes the necessary elements without adding sufficient detail for one or more of the necessary elements.  (10 point): Bidder's technical proposal includes a project plan and schedule that identifies some of the major elements, but is missing one or more of the necessary elements.  (0 points): Bidder does not provide a project plan and/or schedule.  Necessary elements of the project plan and schedule:  1) management, administrative and engineering tasks required for successful completion of each task outlined in the Statement of Work;	25	

Criteria	Scoring	Maximum Points	Proposal Cross- Reference
Key operational considerations for the pilot, including regulatory requirements, limitations to zero emission truck operation, local/regional considerations, and requirements to achieve a successful outcome.	<ol> <li>risks, risk mitigation strategies, and considerations to anticipate and avoid delays;</li> <li>required inputs from Transport Canada (if any are identified in the bidder's proposal), Vehicle Manufacturer, Charging/Fueling Infrastructure Provider, and Fleet Operator / Carrier.</li> </ol>		
The project plan and schedule will be evaluated for its completeness, clarity and achievability.			
R2. Proposed Technical Methodology	(30 points): Bidder provides a comprehensive description of their proposed approach to data	30	
The Bidder's technical proposal should include a proposed approach to the data acquisition and analysis described in sections 5.1 Research Objectives and Analysis, 5.4 Pilot Test Plan	acquisition and analysis with significant added insights. The Bidder provides a detailed data collection methodology and analytical approach for each of the data acquisition and analysis elements of 5.1 Research Objectives and Analysis, 5.4 Pilot Test Plan Development and 5.7 On-Road Pilot Testing of the SoW. All data collection and analysis tasks are thoroughly addressed.		
Development and 5.7 On- Road Pilot Testing of the Statement of Work.	(20 points): Bidder provides a general description of their proposed approach to data acquisition and analysis with a few added insights. The Bidder		
The proposal needs to address:  1) Vehicle, system	provides a high-level data collection methodology and analytical approach for most of the data acquisition and analysis elements of 5.1 Research Objectives and Analysis, 5.4 Pilot Test Plan Development and		
and component data collection and	<ul><li>5.7 On-Road Pilot Testing of the SoW.</li><li>(10 points): Bidder provides a general description of</li></ul>		
analysis; 2) Operating conditions data collection and analysis;	their proposed approach to data acquisition and analysis with no added insights. The Bidder provides a high-level data collection methodology and analytical approach for most of the data acquisition		
User experience evaluation.	and analysis elements of 5.1 Research Objectives and Analysis, 5.4 Pilot Test Plan Development and 5.7 On-Road Pilot Testing of the SoW.		
	(0 points): Bidder does not provide a proposed approach to data acquisition and analysis.		

		Maximum	Proposal
Criteria	Scoring	Points	Cross- Reference
R3. Zero Emission Vehicle Manufacturer  The Bidder should demonstrate a strong level of commitment by the Vehicle Manufacturer to support the pilot.	(20 points): Bidder demonstrates all three of the following. (15 points): Bidder demonstrates only two of the following. (5 points): Bidder demonstrates only one of the following. (0 points): Criterion is not addressed.	20	
The Bidder should demonstrate a strong capability of the Vehicle Manufacturer to provide guidance based on technical details of the technology.  The Bidder should demonstrate that the Vehicle Manufacturer has a thorough understanding of and agreement with their roles and responsibilities and compensation under the Bidder's project plan.	<ol> <li>The Vehicle Manufacturer:         <ol> <li>is committed to supporting the project implementation through regular participation in project meetings, providing technical orientations to regulators, supporting driver training and first responder training, and providing technical support throughout the trial;</li> <li>is capable of and committed to providing guidance based on all technical details of the zero emission technology and its function; and</li> <li>has a thorough understanding of and agreement with their role within the Bidder's technical proposal and their compensation under the Bidder's financial proposal. Actual compensation should not be described as part of the technical proposal.</li> </ol> </li> </ol>		
R4. Charging or Hydrogen Fueling Infrastructure  The Bidder should demonstrate a strong level of commitment by the Infrastructure Provider to support the pilot.	<ul> <li>(15 points): Bidder demonstrates all three of the following.</li> <li>(10 points): Bidder demonstrates only two of the following.</li> <li>(5 points): Bidder demonstrates only one of the following.</li> <li>(0 points): Criterion is not addressed.</li> <li>The Infrastructure Provider is: <ol> <li>Committed to supporting the project implementation through regular participation in project meetings, providing technical orientations to regulators, supporting driver training and first responder training, and providing technical support throughout the trial;</li> <li>Capable of and committed to providing guidance based on all technical details of the charging/fueling technology and its function; and</li> <li>Has a thorough understanding of, and agreement with, their role within the Bidder's technical proposal and their compensation</li> </ol> </li></ul>	15	

Criteria	Scoring	Maximum Points	Proposal Cross- Reference
	compensation should not be described as part of the technical proposal.		
R5. Fleet Operator / Carrier  The Bidder proposes a Canadian fleet operator/carrier with a strong safety reputation as a project partner that will operate the trucks on a commercial route within Canada.	(20 points): Bidder demonstrates all three of the following. (15 points): Bidder demonstrates only two of the following. (10 points): Bidder demonstrates only one of the following. (0 points): Criterion is not addressed.  The Fleet Operator/ Carrier is:  1. Committed to supporting the project implementation for the duration of the pilot and has provided relevant details on their participation including plans to lease or purchase the test vehicle(s) and incorporate the test vehicle(s) into their commercial operations (routes, loads, etc,).  2. Committed to supporting data collection and analysis, with relevant details on the data they have agreed to provide (e.g. maintenance logs, operating costs, user surveys, etc.).  3. Has a thorough understanding of and agreement with their role within the Bidder's technical proposal and their compensation under the Bidder's financial proposal. Actual compensation should not be described as part of the technical proposal.	20	
R6. Zero Emission Vehicle Technology  Points are awarded for proposals that include technology that is more advanced than the minimum mandatory requirement, pushing the limits of driving range capabilities of current zero emission trucking technologies. Hydrogen fuelled zero emission vehicles and vehicles with longer range driving capabilities are preferred, as these are less commonly available and therefore present a unique opportunity to gather data and inform stakeholders. The bidder must provide a letter of commitment from the OEM.	<ul> <li>(25 points): Bidder demonstrates two of the following.</li> <li>(15 points): Bidder demonstrates only one of the following.</li> <li>(0 points): Criterion is not addressed.</li> <li>1. Bidder's technical proposal includes a zero emission Class 7 or 8 freight-hauling truck with a nominal driving range greater than 600 km, and a letter of commitment from an OEM to provide this truck.</li> <li>2. Bidder's technical proposal includes a zero emission Class 7 or 8 freight-hauling truck that is fueled by hydrogen, and a letter of commitment from an OEM to provide this truck.</li> </ul>	250	

Criteria	Scoring	Maximum Points	Proposal Cross- Reference
R7. Testing Multiple Zero Emission Vehicles  Zero emission technology for heavy-duty trucking continues to evolve, and real-world data from a range of vehicles from different OEMs will help to accelerate readiness in Canada.	<ul> <li>(20 points): Bidder demonstrates two of the following.</li> <li>(10 points): Bidder demonstrates only one of the following.</li> <li>(0 points): Criterion is not addressed.</li> <li>1. The technical proposal includes at least two zero emission Class 7 or 8 freight-hauling trucks. Letters of commitment are provided from all included OEMs.</li> <li>2. The technical proposal includes zero emission Class 7 or 8 freight-hauling trucks from different OEMs. Letters of commitment are provided from all included OEMs.</li> </ul>	20	

### R8 - R12. Experience

For each criterion below, the experience of one resource on the Bidder's project team will be evaluated. The same resource may be proposed for more than one criterion.

The same project may be used to demonstrate the experience for one or more criteria.

R7. Demonstrates the proposed resource has experience leading and managing Class 7 or 8 commercial vehicle technology pilot testing projects in real world commercial operations.

The Bidder should demonstrate this experience by identifying one proposed resource (name and role on the project team), and providing a brief abstract of project(s) the proposed resource has commenced and completed, within the last eight (8) years, measured from the date of bid closing, that clearly demonstrates the month and year commenced and completed, and how (through what activities, responsibilities and approach) they successfully completed each project.

The examples must include references with the following required information:

- Name
- Duration (mm-yyyy to mm-yyyy)
- Phone Number and/or Email

(20 points): Bidder demonstrates a minimum of 60 months experience as well as three or more relevant projects involving technology testing on Class 7 and/or 8 commercial freight-hauling vehicles in real world operations.

(15 points): Bidder demonstrates either a minimum of 60 months experience or three or more projects involving technology testing on Class 7 and/or 8 commercial freight-hauling vehicles in real world operations.

(10 points): Bidder demonstrates two projects involving technology testing on Class 7 and/or 8 commercial freight-hauling vehicles in real world operations.

(5 points): Bidder demonstrates one project involving technology testing on Class 7 and/or 8 commercial freight-hauling vehicles in real world operations.

**(0 points):** Bidder demonstrates no relevant projects.

R8. Demonstrates the proposed resource has experience collecting and analyzing data from hydrogen and/or battery electric vehicle technology testing.

The Bidder should demonstrate experience measuring and analyzing safety- and/or environmental-related metrics, such as energy consumption, driving range, battery voltage and current, pressure vessel pressures and temperatures, component failures, maintenance causes and effects, etc. from on-road, track, or laboratory vehicle operations.

(20 points): Bidder demonstrates a minimum of 60 months experience and two or more projects involving relevant hydrogen and/or electric vehicle data collection and analyses.

(15 points): Bidder demonstrates either a minimum of 60 months experience or two projects involving relevant hydrogen and/or electric vehicle data collection and analyses.

(10 points): Bidder demonstrates one project involving relevant hydrogen and/or electric vehicle data collection and analyses.

20

20

The Bidder should demonstrate this experience by identifying one proposed resource (name and role on the project team), and providing a brief abstract of project(s) the proposed resource has commenced and completed, within the last eight (8) years, measured from the date of bid closing, that clearly demonstrates the month and year commenced and completed, and how (through what activities, responsibilities and approach) they successfully	(0 points): Bidder demonstrates no relevant projects.		
completed each project.  The examples must include references with the following required information:  - Name  - Duration (mm-yyyy to mm-yyyy)  - Phone Number and/or Email			
R9. Demonstrates the proposed resource has experience coordinating stakeholder engagement workshops.  The Bidder should demonstrate experience coordinating stakeholder workshops to develop consensus, present technical results, and seek feedback.  The Bidder should demonstrate this experience by identifying one proposed resource (name and role on the project team), and providing a brief abstract of project(s) the proposed resource has commenced and completed, within the last eight (8) years, measured from the date of bid closing, that clearly demonstrates the month and year commenced and completed, and how (through what activities, responsibilities and approach) they successfully completed each project.	(15 points): Bidder demonstrates a minimum of three projects demonstrating stakeholder workshop coordination. At least one project involves stakeholders from Canada's regulatory or safety framework (regulators, first responders, etc.).  (10 points): Bidder demonstrates two projects demonstrating stakeholder workshop coordination.  (5 points): Bidder demonstrates one project demonstrating stakeholder workshop coordination.  (0 points): Bidder demonstrates no relevant projects.	15	
The examples must include references with the following required information:  - Name  - Duration (mm-yyyy to mm-yyyy)  - Phone Number and/or Email			

R10. Demonstrates the proposed resource has experience coordinating training on advanced vehicle technologies.  The Bidder should demonstrate the proposed resource has experience in coordinating training on advanced vehicle technologies for vehicle drivers, maintenance staff, first responders, or other stakeholders.  The Bidder should demonstrate this experience identifying one proposed resource (name and role on the project team), and by providing a brief abstract of project(s) the proposed resource has commenced and completed, within the last eight (8) years, measured from the date of bid closing, that clearly demonstrates the month and year commenced and completed, and how (through what activities, responsibilities and approach) they successfully completed each project.  The examples must include references with the following required information:  Name  Duration (mm-yyyy to mm-yyyy)  Phone Number and/or Email	(20 points): Bidder demonstrates three projects coordinating training on advanced vehicle technologies. At least one project involves a Class 7 or 8 freight-hauling vehicle.  (15 points): Bidder demonstrates at least two projects coordinating training on advanced vehicle technologies. At least one project involves a Class 7 or 8 freight-hauling vehicle.  (10 points): Bidder demonstrates at least one project coordinating training on advanced vehicle technologies.  (0 points): Bidder demonstrates no relevant projects.	20	
Total Points	Maximum Rated Points Available: Overall Minimum Pass Mark:	230 points 138 points (60%)	

#### PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION

#### 5.1 General

- A. Bidders must provide the required certifications and additional information to be awarded a contract.
- B. The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.
- C. The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

## 5.2 Certifications Required with the Bid

A. Bidders must submit the following duly completed certifications as part of their bid.

## 5.2.1 Integrity Provisions - Declaration of Convicted Offences

A. In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, if applicable, the Integrity declaration form available on the <a href="Forms for the Integrity Regime">Forms for the Integrity Regime</a> website <a href="(http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html">(http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html</a>), to be given further consideration in the procurement process.

#### 5.3 Certifications Precedent to Contract Award and Additional Information

A. The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

## 5.3.1 Integrity Provisions - Required Documentation

A. In accordance with the section titled "Information" to be provided when bidding, contracting or entering into a real property agreement of the <a href="Ineligibility and Suspension Policy">Ineligibility and Suspension Policy</a> (<a href="http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html">http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html</a>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

## 5.3.2 Federal Contractors Program for Employment Equity - Bid Certification

- A. By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the <a href="Employment and Social Development Canada (ESDC)">Employment and Social Development Canada (ESDC)</a> Labour's website (<a href="https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour/programs/employment-equity/federal-contractors/compliance-assessment.html">https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour/programs/employment-equity/federal-contractors/compliance-assessment.html</a>).
- B. Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid list at the time of contract award.
- C. Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" (<a href="https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour/programs/employment-equity/federal-contractors/compliance-assessment.html">https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour/programs/employment-equity/federal-contractors/compliance-assessment.html</a>) list during the period of the Contract.

D. The Bidder must provide the Contracting Authority with a completed attachment titled "Federal Contractors Program for Employment Equity - Certification" before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

## 5.3.3 Status and Availability of Resources

- A. The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications, and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.
- B. If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

## 5.3.4 Education and Experience

A. The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract. I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information

1.

# ATTACHMENT 1 TO PART 5 - FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

	verific contra during certific	ation at actor in d the con cations.	all time lefault, itract p Failure	f the date indicated below. The certifications provided to Canada are subject to es. I understand that Canada will declare a bid non-responsive, or will declare a if a certification is found to be untrue, whether during the bid evaluation period or eriod. Canada will have the right to ask for additional information to verify the Bidder's to comply with any request or requirement imposed by Canada may render the bid onstitute a default under the Contract.	
2.	and S	For further information on the Federal Contractors Program for Employment Equity visit the <a href="Employment and Social Development Canada">Employment Canada</a> (ESDC) - Labour ( <a href="https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html">https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html</a> ) website.			
3.	Date: solicit	ation clo	sing da	(YYYY/MM/DD) (if left blank, the date will be deemed to be the bid ate.)	
4. Complete both A. and B.:			d B.:		
	A.	Check	conly c	one of the following:	
		( )	A1.	The Bidder certifies having no work force in Canada.	
		( )	A2.	The Bidder certifies being a public sector employer.	
		( )	A3.	The Bidder certifies being a <u>federally regulated employer</u> being subject to the <u>Employment Equity Act</u> .	
		( )	A4.	The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.	
			A5.	The Bidder has a combined workforce in Canada of 100 or more employees; and	
			( )	A5.1. The Bidder certifies already having a valid and current <u>Agreement to Implement Employment Equity</u> (AIEE) in place with ESDC-Labour.	
			OR		
			( )	A5.2. The Bidder certifies having submitted the <u>Agreement to Implement Employment Equity (LAB1168)</u> to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.	
	B.	Check	c only c	one of the following:	
		( )	B1.	The Bidder is not a Joint Venture.	
		OR			
		( )	B2.	The Bidder is a Joint venture, and each member of the Joint Venture must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification (refer to the Joint Venture section of the Standard	

Instructions).

## PART 6 - SECURITY, FINANCIAL, AND OTHER REQUIREMENTS

## 6.1 Security Requirements

A. There is no security requirement associated with this bid solicitation.

## 6.2 Financial Capability

A. SACC Manual clause <u>A9033T</u> (2012-07-16), Financial Capability

#### PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

## **ARTICLES OF AGREEMENT**

## 7.1 Statement of Work

A. The Contractor must perform the Work in accordance with the Annex titled "Statement of Work".

#### 7.2 Standard Clauses and Conditions

A. All clauses and conditions identified in the Contract by number, date and title are set out in the <u>Standard Acquisition Clauses and Conditions Manual (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.</u>

#### 7.2.1 General Conditions

 A. <u>2035</u> (2022-12-01), General Conditions - Higher Complexity - Services, apply to and form part of the Contract.

## 7.2.2 Supplemental General Conditions

A. The following Supplemental General Conditions apply to and form part of the Contract:

4007 (2022-12-01), Canada to Own Intellectual Property Rights in Foreground Information

## 7.3 Security Requirements

A. There is no security requirement applicable to the Contract.

#### 7.4 Term of Contract

#### 7.4.1 Period of the Contract

A. The period of the Contract is from date of Contract to December 15, 2026, inclusive.

## 7.5 Authorities

## 7.5.1 Contracting Authority

A. The Contracting Authority for the Contract is:

Name: Cory Lajoie

Title: Procurement Specialist, Procurement & Material Management

Department: Transport Canada

Address: 344 Edmonton St, Winnipeg, MB R3B 2L4

Telephone: 204-228-2267 E-mail: cory.lajoie@tc.qc.ca

B. The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

## 7.5.2 Project Authority

A. The Project Authority for the Contract is:

ation to be detailed in the resulting contract
<del></del>
<del></del>
<del></del>
n

B. The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

## 7.5.3 Contractor's Representative

[Contact infor	mation to be detailed in the resulting contract
Name:	
Title:	
Address:	
	<del></del>
Telephone:	<del></del>
E-mail:	<del></del>

#### 7.6 Proactive Disclosure of Contracts with Former Public Servants

A. By providing information on its status, with respect to being a former public servant in receipt of a <u>Public Service Superannuation Act</u> (<a href="http://laws-lois.justice.gc.ca/eng/acts/P-36/FullText.html">http://laws-lois.justice.gc.ca/eng/acts/P-36/FullText.html</a>) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with <a href="https://www.canada.ca/en/treasury-board-secretariat/services/policy-notice/changes-contracting-limits-approval-new-requirements.html">https://www.canada.ca/en/treasury-board-secretariat/services/policy-notice/changes-contracting-limits-approval-new-requirements.html</a>) of the Treasury Board Secretariat of Canada.

#### 7.7 Payment

#### 7.7.1 Basis of Payment

- A. In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price as specified in the Annex titled "Basis of Payment" for a cost of \$[amount to be detailed in the resulting contract]. Customs duties are included and Applicable Taxes are extra.
- B. Canada will not pay the Contractor for any design changes, modifications, or interpretations of the Work unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

#### 7.7.2 Milestone Payments

A. SACC Manual clause <u>H3010C</u> (2016-01-28), Milestone Payments – Not subject to holdback

### 7.7.3 Method of Payment

### 7.7.3.1 Multiple Payments

- A. Canada will pay the Contractor upon completion and delivery of units in accordance with the payment provisions of the Contract if:
  - (i) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - (ii) all such documents have been verified by Canada; and
  - (iii) the Work delivered has been accepted by Canada.

## 7.7.4 Electronic Payment of Invoices - Contract

A. The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

## [List to be updated in the resulting contract]

- (i) Visa Acquisition Card;
- (ii) MasterCard Acquisition Card;
- (iii) Direct Deposit (Domestic and International);
- (iv) Electronic Data Interchange (EDI);
- (v) Wire Transfer (International Only); and
- (vi) Large Value Transfer System (LVTS) (Over \$25M).

## 7.8 Invoicing Instructions

- A. The Contractor must submit invoices in accordance with the section titled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
- B. Each invoice must be supported by:
  - (i) A copy of the release document and any other documents as specified in the Contract;
  - (ii) A description of the Work delivered.
- C. Invoices must be distributed as follows:
  - (i) The original and 1 copy must be forwarded to the address shown on page 1 of the Contract for certification and payment;
  - (ii) By submitting a .pdf copy, the Contractor certifies that the .pdf copy of each invoice will be considered as the original invoice. In addition, the Contractor must indicate the contract number and name of the Project Authority in its covering e-mail. Invoices claiming Travel and Living costs must be submitted in hard copy in order to provide original receipts, as per Treasury Board regulations.

#### 7.9 Certifications and Additional Information

## 7.9.1 Compliance

A. Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are

conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

## 7.9.2 Federal Contractors Program for Employment Equity - Default by the Contractor

A. The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list (https://www.canada.ca/en/employment-social-development/corporate/portfolio/labour/programs/employment-equity/federal-contractors/compliance-assessment.html). The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

## 7.10 Applicable Laws

Α.	The Contract must be interpreted and governed, and the relations between the parties determined, by the	ne
	laws in force in	

## 7.11 Priority of Documents

- A. If there is a discrepancy between the wordings of any of the documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.
  - (i) The Articles of Agreement;
  - (ii) The supplemental general conditions <u>4007</u> (2022-12-01), Canada to Own Intellectual Property Rights in Foreground Information:
  - (iii) The General Conditions 2035 (2022-12-01), General Conditions Higher Complexity Services;
  - (iv) Annex A, Statement of Work;
  - (v) Annex B, Basis of Payment; and
  - (vi) the Contractor's bid dated [date to be specified in the resulting contract], excluding the Contractors Terms and Conditions; the Contract contains the Terms and Conditions between the parties.

## 7.12 Foreign Nationals (Canadian Contractor or Foreign Contractor)

- A. SACC Manual clause A2000C (2006-06-16) Foreign Nationals (Canadian Contractor)
- B. SACC Manual clause <u>A2001C</u> (2006-06-16) Foreign Nationals (Foreign Contractor)

## 7.13 Insurance - No Specific Requirement

A. The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

#### 7.14 Inspection and Acceptance

A. The Project Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

### 7.15 Dispute Resolution

- A. The Parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- B. The Parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other Party or Parties and attempt to resolve problems or differences that may arise.
- C. If the Parties cannot resolve a dispute through consultation and cooperation, the Parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- D. Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "<u>Dispute Resolution</u>" (<u>https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/contract-management/dispute-resolution</u>).

## 7.15.1 Dispute Resolution - Office of the Procurement Ombudsman

A. The Parties agree to make every reasonable effort, in good faith, to settle amicably all disputes or claims relating to the Contract, through negotiations between the Parties' representatives authorized to settle. If the Parties do not reach a settlement within 25 working days after the dispute was initially raised to the other Party in writing, either Party may contact the Office of the Procurement Ombudsman (OPO) to request dispute resolution/mediation services. OPO may be contacted by e-mail at <a href="mailto:boa.opo@boa-opo.gc.ca">boa.opo@boa-opo.gc.ca</a>, by telephone at 1-866-734-5169, or by web at <a href="mailto:www.opo-boa.gc.ca">www.opo-boa.gc.ca</a>. For more information on OPO's services, please see the <a href="mailto:Procurement Ombudsman Regulations">Procurement Ombudsman Regulations</a> (<a href="https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-143/page-1.html">https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-143/page-1.html</a>) or visit the OPO website.

#### **ANNEX A - STATEMENT OF WORK**

#### 1. OBJECTIVE

Transport Canada currently has a requirement for professional services for project coordination and testing of zero emission freight-hauling truck technology in real world commercial operation in Canada.

#### 2. TERMINOLOGY

The following list of definitions and acronyms is relevant to the project. The list is not exhaustive, but rather is intended to ensure clarity of understanding of critical terms and acronyms used within this statement of work. *Table 1: Terminology* 

Term/Acronym	Definition
Class 7 vehicle	A heavy-duty vehicle having a gross vehicle weight rating (GVWR) of more than 11,793 kg, but not more than 14,969 kg.
Class 8 vehicle	A heavy-duty vehicle having a GVWR of more than 14,969 kg.
MHDV	Medium- or heavy-duty vehicle
GHG	Greenhouse gas
GVWR	Gross vehicle weight rating
TC	Transport Canada
OEM	Original equipment manufacturer
F/P/T/M	Federal, provincial, territorial, municipal
Zero Emission	A vehicle that is powered by a battery electric or hydrogen fuel cell electric
Vehicle	propulsion system. For the purposes of this statement of work, a vehicle that is powered by a 100% hydrogen internal combustion engine is also included. Hybrid, plug-in hybrid, and dual-fuel vehicles are not included.

## 3. BACKGROUND

To avert the worst impacts of climate change, the Government of Canada is committed to achieving net-zero emissions by 2050. Medium and Heavy-Duty Vehicles (MHDVs) account for approximately 9% of Canada's total greenhouse gas (GHG) emissions, making the adoption of zero emission vehicles in this sector a key factor in achieving emission reduction goals.

While zero emission solutions are becoming increasingly available for MHDVs with relatively short driving range requirements (e.g. urban delivery), solutions for longer distance applications are less commonly available in the Canadian marketplace. Safety and performance data is needed on emerging hydrogen fuel cell and battery electric long-distance freight-hauling truck technologies to support their integration into Canada's trucking sector. Data collection and analysis from early deployments will help develop training programs, enable insurance providers to develop commercial products for the trucking industry, and help to inform codes, standards and regulations for these new technologies.

In addition, the trucking industry must navigate complex operational considerations relating to weights and dimensions regulations that vary across jurisdictions, hours of service regulations, commercial vehicle safety inspection regimes, driver training requirements, and international fuel tax agreements. The involvement of a range of regulators and industry stakeholders in early zero emission truck deployments will help to proactively address these challenges, clearing the path for future deployments.

In order to gather the necessary data and bring together the key stakeholders, the Zero Emission Trucking Program will establish technology testbeds, conducting real world pilot testing of emerging zero emission trucking technology. Through the testbeds, Transport Canada will:

1. Gather the technical evidence needed to accelerate regulatory readiness through pilot testing of emerging zero emission trucking technologies during real-world commercial operations in Canada.

- Enable stakeholders involved in the regulatory and safety framework for Canada's trucking sector to accompany early real-world pilots of emerging zero emission technologies for Class 7 and 8 freight-hauling trucks.
- Bring stakeholders together through dedicated workshops and ongoing collaboration throughout the
  testbeds to share experiences, results, lessons learned and best practices as they relate to designing
  safety and regulatory development.

The first Zero Emission Trucking Testbed has been established and will gather data from battery electric freight-hauling trucks operating in the province of Quebec. With the goal of expanding testbed coverage to include additional powertrain technologies and multiple jurisdictions, Transport Canada is seeking to establish up to two additional testbeds. To expand on the first testbed, the new testbeds must include hydrogen powertrain technologies or, if only battery electric vehicles are included, they must be located entirely or partially in Canadian jurisdictions other than Quebec.

#### 4. ROLES AND RESPONSIBILITIES

## 4.1 Transport Canada (Project Authority)

Transport Canada will provide the Contractor with:

- a) coordination of engagement with departmental stakeholders, such as vehicle safety regulators, as appropriate;
- b) provision of timely review, feedback and approval of deliverables (approximately 5-10 business days unless otherwise specified);
- c) development of user-experience surveys;
- d) Transport Canada, as project authority, may stop the project at any time if the safety risk mitigation measures are deemed by TC to be inadequate. The project may resume if appropriate risk mitigation measures are put in place within a timeline agreed to by the Contractor and TC. If a resolution cannot be reached (i.e. risk mitigation measures are deemed by TC to be inadequate) the project will be permanently stopped and the Contractor will be paid for the milestones and deliverables completed to date (Section 7).

## **4.2 Contractor**

The Contractor is the principal project manager for this project and is responsible for:

- a) coordinating project partners and stakeholders throughout the project including, but not limited to, the Vehicle Original Equipment Manufacturer (OEM), Canadian Motor Carrier, and Infrastructure Provider;
- b) acquiring an appropriate insurance for all aspects of the project, as determined by the Contractor and agreed by TC, and considering the requirements of the jurisdiction in which the test vehicles are operating;
- c) coordinating the inclusion of a conventional truck, which is comparable to the zero-emission truck, in the testbed;
- d) leading, managing and executing all tasks and deliverables as described in the Statement of Work.

#### 4.3 Vehicle OEM (coordinated by Contractor)

The Vehicle OEM will be responsible for:

- a) providing one or more Class 7 or 8 zero emission trucks, as described in Section 5.2, for the duration of the project:
- b) all regulatory requirements pertaining to the Vehicle OEM;
- c) demonstrating that they have a robust safety strategy to mitigate safety risks related to the hydrogen fuel system, compressed hydrogen storage system, electrical systems and batteries as applicable. Information on this strategy shall be provided by the Vehicle OEM to Transport Canada, including information on industry standards that have been applied to minimize safety risk, and whether it can be demonstrated that the vehicle meets performance standards currently proposed under the draft Global Technical Regulation

- 13 on Hydrogen and Fuel Cell Vehicles<sup>2</sup> for hydrogen and fuel cell vehicles, and/or Global Technical Regulation 20 on Electric Vehicle Safety<sup>3</sup> for hydrogen and battery electric vehicles.
- d) working with local first responders, as described in Section 5.6, to ensure they are equipped with relevant information to respond to a collision or other incident safely;
- e) working with local roadside inspectors to ensure that they are equipped with relevant information to conduct roadside inspections;
- supporting training, as described in Section 5.6, for drivers, vehicle mechanics, maintenance, and logistics staff by providing vehicle technical information at training sessions and answering questions from training participants;
- g) providing a technical orientation on the vehicle, as described in Section 5.6, to F/P/T/M regulators and other relevant stakeholders as determined by the Contractor and agreed to by TC;
- h) supporting on-road testing with staff on site for driver training and first responder training;
- i) providing engineering support pertaining to the test vehicle(s) throughout the project.

### 4.4 Canadian Motor Carrier (coordinated by Contractor)

The Canadian Motor Carrier will be responsible for:

- a) Incorporating the test vehicle into its commercial operations, including, but not limited to:
  - a. leasing or purchasing the test vehicle(s) for the duration of the pilot;
  - b. licensing and insurance on the test vehicles for the duration of the pilot;
  - c. participating in technical orientations on the vehicle and fueling/charging technologies, as described in Section 5.6;
  - d. logistics for planning and scheduling shipments, drivers, fueling/charging times, maintaining regulatory compliance (e.g. weight regulations, hours of service), etc.
  - e. providing dedicated drivers to participate in driver training, drive the zero emission vehicle in commercial operations throughout the duration of the pilot, and complete approximately 3 user experience surveys at the start, middle and end of the pilot;
  - f. complying with all applicable commercial vehicle laws in the region of operation, including, but not limited to, regulations on vehicle weights and dimensions, hours of service, Motor Vehicle Fitness Certificate Regulations, etc.
  - g. providing data to support analysis and reporting, as described in Section 5.4, including, but not limited to, maintenance logs, operating and maintenance costs during the pilot, historical costs for conventional diesel vehicle operations, and user survey results from drivers and other fleet staff.

#### 4.5 Infrastructure Provider (coordinated by Contractor)

The infrastructure provider will be responsible for:

- a) providing fuel supply and access to the necessary fueling or charging infrastructure throughout the duration of the pilot;
- b) providing a technical orientation on the safe use of the fueling or charging infrastructure, as described in Section 5.6;
- c) providing engineering support pertaining to the fueling or charging infrastructure throughout the project.

<sup>&</sup>lt;sup>2</sup> Global Technical Regulation 13 on Hydrogen and Fuel Cell Vehicles (draft pending approval) available here: <a href="https://unece.org/transport/documents/2022/05/informal-documents/iwg-gtr13-phase-2-proposal-amendments-1-global">https://unece.org/transport/documents/2022/05/informal-documents/iwg-gtr13-phase-2-proposal-amendments-1-global</a>

<sup>&</sup>lt;sup>3</sup> Global Technical Regulation 20 on Electric Vehicle Safety available here: <a href="https://unece.org/transport/standards/transport/vehicle-regulations-wp29/global-technical-regulations-gtrs">https://unece.org/transport/standards/transport/vehicle-regulations-wp29/global-technical-regulations-gtrs</a>

#### 5. SCOPE

This section defines the scope of work, including descriptions of each activity. A corresponding schedule of tasks and deliverables is provided in Section 7 Schedule of Tasks and Deliverables. The Contractor is responsible for leading, managing, and executing all components of the project within the scope of work.

## 5.1 Research Objectives and Analysis

The objectives of on-road pilot testing are to address knowledge and data gaps regarding real world performance of zero emission trucking technology, user experiences, safety considerations, and operational best practices. Analysis will include:

- a) Weather impacts on vehicle, system, and component performance, including, but not limited to, range, energy consumption, and user experience
- b) Impacts of route characteristics, including grade, on vehicle performance, including, but not limited to, range, energy consumption, and user experience
- c) Maintenance causes and effects, including descriptions of component or system failures if applicable, the resulting alerts to operators, maintenance requirements and resulting downtime
- d) Cost of ownership comparison between the zero emission truck(s) and a conventional diesel counterpart, using actual operational and maintenance costs from the pilot
- e) Operational limitations (e.g. limiting route characteristics such as road grade, weight and dimensions restrictions, weather conditions, etc.)
- f) Typical and edge case operating conditions for vehicle, system and components (e.g. minimum and maximum component temperature, hydrogen storage system pressure, battery voltage and current, etc. as applicable)
- g) User experience and Canadian Motor Carrier recommendations, including, but not limited to, survey results from drivers, maintenance staff, and fleet logistics coordinators
- h) Safety considerations
- i) Conclusions and recommendations for future deployments

#### 5.2 Test Vehicles

The test vehicle will be one or more zero emission Class 7 or 8 freight-hauling trucks capable of at least 400 km driving range. Vehicles with longer range driving capabilities are preferred, as these are less commonly available and therefore present a unique opportunity to gather data and inform stakeholders. The vehicle(s) must be developed to a technology-readiness level of at least 74, which represents a prototype ready for demonstration in an appropriate operational environment. The zero emission technology must be battery electric, fuel cell electric, or 100% hydrogen internal combustion and must be fully integrated and ready for on-road pilot testing or full deployment. The vehicle OEM must demonstrate that the vehicle meets all Canadian motor vehicle regulatory requirements, including but not limited to emissions requirements and safety requirements. In some cases, the Vehicle OEM may seek approval from Transport Canada using the exemption process under Section 9 or temporary importation process under Section 7 of the Motor Vehicle Safety Act. Additionally, the vehicle OEM must demonstrate that they have a robust strategy to mitigate safety risks related to the hydrogen fuel system. compressed hydrogen storage system, electrical systems and batteries as applicable. Information on this strategy shall be provided by the Vehicle OEM to Transport Canada, including information on industry standards that have been applied to minimize safety risk, and whether it can be demonstrated that the vehicle meets performance standards currently proposed under the draft Global Technical Regulation 13 on Hydrogen and Fuel Cell Vehicles<sup>5</sup> for hydrogen and fuel cell vehicles, and/or Global Technical Regulation 20 on Electric Vehicle Safety<sup>6</sup> for hydrogen

<sup>&</sup>lt;sup>4</sup> Technology Readiness Levels defined here: <a href="https://www.ic.gc.ca/eic/site/080.nsf/eng/00002.html">https://www.ic.gc.ca/eic/site/080.nsf/eng/00002.html</a>

<sup>&</sup>lt;sup>5</sup> Global Technical Regulation 13 on Hydrogen and Fuel Cell Vehicles (draft pending approval) available here: <a href="https://unece.org/transport/documents/2022/05/informal-documents/iwg-gtr13-phase-2-proposal-amendments-1-global">https://unece.org/transport/documents/2022/05/informal-documents/iwg-gtr13-phase-2-proposal-amendments-1-global</a>

<sup>&</sup>lt;sup>6</sup> Global Technical Regulation 20 on Electric Vehicle Safety available here: <a href="https://unece.org/transport/standards/transport/vehicle-regulations-wp29/global-technical-regulations-gtrs">https://unece.org/transport/standards/transport/vehicle-regulations-wp29/global-technical-regulations-gtrs</a>

and battery electric vehicles. In addition to the zero emission vehicle(s), a comparable conventional vehicle must be included in the on-road pilot testing to enable comparison between conventional and zero emission vehicles.

## 5.3 Dedicated Driving Route and Mileage Accumulation

The Contractor will identify a dedicated driving route for pilot testing that is located partially or entirely in a Canadian jurisdiction. The route must be a regional- or long-haul route (e.g. moving freight between cities or regions) with a minimum trip length of 250 km between fueling or charging events. Although the zero emission truck must have a nominal range of at least 400 km, the minimum trip length is set lower to accommodate variability in real world driving range that may occur depending on ambient temperatures, elevation changes, traffic conditions, etc. The Contractor will identify the jurisdictions and local first responders that will participate in technical orientations and training (Section 5.6 Technical Orientation and Training) based on the location of the dedicated driving route. The Contractor will also identify and comply with the local jurisdictional requirements for conducting the on-road pilot testing including necessary licensing, permitting, insurance and approvals. Data must be collected over a minimum of 24,000 km travelled in real world commercial operations over the duration of the pilot.

## **5.4 Pilot Test Plan Development**

The Contractor will develop a pilot test plan that includes 12 months of on-road pilot testing, including data collection over at least 24,000 km of commercial operation including at least 8,000 km between November and March inclusive and at least 8,000 km between April and October inclusive.. The pilot test plan must include testing of at least one zero emission Class 7 or 8 freight-hauling truck, and one comparable conventional truck. The test plan must also include descriptions and timelines for the following activities:

- a) Obtaining the necessary licensing, permitting, insurance and approvals.
- b) Training for drivers, mechanics, fleet staff, and local first responders.
- c) Technical orientation for federal and provincial/territorial regulators and roadside inspectors.
- d) Pilot testing of the zero emission truck and the comparable conventional truck in real world commercial operations for 12 months including, but not limited to:
  - schedule of tasks, roles and responsibilities of partners (Contractor, Motor Carrier, Vehicle OEM. Infrastructure Provider)
  - ii. specific dedicated driving route(s) including location and frequency of trips
  - iii. charger/fueling requirements (e.g. quantities of hydrogen, hydrogen delivery pressure, electric charging power, etc.)
  - iv. charging/fueling schedule
  - v. considerations for weather and terrain (e.g. operational limits for adverse road conditions, temperature conditions, etc.)
  - vi. considerations for cargo weight and contents (e.g. shipments must not include transportation of dangerous goods, maximum weight allowance, etc.)
  - vii. considerations for indoor vehicle storage and maintenance (e.g. hydrogen detection and warning systems, ventilation, etc.)
- e) Data acquisition for both the zero emission truck and conventional truck including instrumentation, data logging methodologies, and sampling rates to record and/or evaluate the following parameters:
  - vehicle, system and component performance including, but not limited to, energy/hydrogen consumption, driving range, hydrogen concentration detection capabilities, reliability and durability
  - ii. charging or fueling infrastructure performance including charging or fueling rates, downtime, and measurement accuracy
  - iii. typical and edge case operating parameters including operational battery voltage and current, component temperatures, pressure vessel cycling conditions
  - iv. maintenance causes and effects including, but not limited to, vessel over temperature and hydrogen leak detection
  - v. user experiences including driver and fleet personnel surveys to help inform training and best practices, working closely with TC Human Factors specialists to develop and administer the survey

- vi. operating and maintenance costs
- vii. operating conditions including cargo weight, ambient weather conditions, route characteristics (including elevation changes), traffic conditions, vehicle km travelled, vehicle speed/acceleration, and hard braking events
- viii. advanced driver assistance system parameters if available including forward collision warnings, lane departure warnings, and vulnerable road user detections
- f) Data analysis details, including how the data will be used to address research objectives as described in Section 5.1 Research Objectives and Analysis.
- g) Risk management plan including:
  - i. Hazard identification, risk analysis, and risk mitigation for safe implementation of the on-road pilot
  - ii. Analysis of risks to budget and schedule, and appropriate risk mitigation measures to support successful completion of the project on schedule and on budget

The Contractor will deliver a draft pilot test plan to TC, and this will be presented for review and comment at the Stakeholder Engagement Workshop (Section 5.5), in accordance with Section 7. Subsequently, the Contractor will deliver a final pilot test plan addressing TC feedback, in accordance with Section 7.

## 5.5 Stakeholder Engagement Workshops

The Contractor will hold two in-person stakeholder engagement workshops at an appropriate location in Canada near the dedicated driving route to facilitate attendance by local and regional stakeholders. The workshops will include: federal safety and environmental regulators (up to 10 people); fleet personnel, including drivers and maintenance staff; local/regional provincial/territorial regulators (up to 10 people); law enforcement officials responsible for highway vehicle safety; first responders; and other relevant stakeholders. The Contractor must identify the appropriate local representatives based on the location of the dedicated route (Section 5.3). If multiple jurisdictions are implicated (i.e. a cross-border route with the U.S.A. or multiple provinces), representatives should be invited from each of these jurisdictions. Approximately 60 to 75 people are expected to attend the workshop. The Contractor must provide draft workshop materials to TC, and address TC feedback in final materials as indicated in Section 7.0.

The first in-person workshop will take place after delivery of the draft pilot test plan to TC, in accordance with Section 7.0. The Contractor will present the draft pilot test plan, and workshop participants will have an opportunity to review the test plan, ask questions, and provide feedback to the Contractor.

The second in-person workshop will take place after delivery of the final report to TC, and participants will include those from the original workshop as well as representatives from provinces and territories across Canada (up to 15 additional people), and appropriate representatives from federal departments and agencies in the U.S.A. (up to 10 people). The Contractor will present final results from on-road pilot testing and participants will have an opportunity to ask questions and discuss the results.

The Contractor will address accommodation requests from workshop participants and take necessary actions to make the workshop accessible in relation to participant needs, up to the point of undue hardship.

The Contractor will develop and administer a short survey to workshop participants at each workshop to seek feedback on the test plan (first workshop) and seek feedback on the utility of the results (second workshop).

## 5.6 Technical Orientation and Training

For all technical orientation and training sessions the Contractor will provide draft materials to TC for review and feedback, and will address TC feedback in final materials, as indicated in Section 7 Schedule of Tasks and Deliverables.

The Contractor will address accommodation requests from training participants and take necessary actions to make the training accessible in relation to participant needs, up to the point of undue hardship.

## 5.6.1 Technical Orientation to Zero Emission Truck Safety

The Contractor will coordinate with the Vehicle OEM and Infrastructure Provider to hold an in-person technical orientation to their zero emission vehicle technology for approximately 20 federal and provincial safety regulators, and other relevant stakeholders. The technical orientation will be held in Canada at an appropriate location near the dedicated driving route, and will involve hands-on exposure to the zero emission technology including:

- a) an orientation to the safety of the vehicle including the hydrogen fuel system, compressed hydrogen storage system, rechargeable electrical energy storage system and electrical safety system, as applicable.
- b) a description of the steps the Vehicle OEM has taken to meet international or industry safety standards and/or regulations including *Global Technical Regulation 20 on Electric Vehicle Safety*, and *Global Technical Regulation 13 on Hydrogen and Fuel Cell Vehicles*.
- c) an orientation to fueling/charging safety.
- d) an orientation to roadside inspection considerations.
- e) an orientation to on-road safety considerations including zero emission technology durability, inspection requirements, road infrastructure, considerations for enclosed spaces (e.g. covered bridges, parking, maintenance) etc.

The Contractor will develop and administer a short survey to gather feedback and evaluate the utility of the technical orientation.

## 5.6.2 Fleet Training

The Contractor will work with the Motor Carrier, Vehicle OEM and Infrastructure Provider to coordinate training for drivers, maintenance staff, and other relevant fleet personnel (e.g., logistics coordinators) on their specific roles and responsibilities with respect to vehicle operation and maintenance during the trial including hands-on training on how to safely operate and maintain the vehicle, ensure safe operating environments, identify normal and abnormal operation, identify and avoid hazardous scenarios, and respond to abnormal events or hazardous scenarios. An overview of the fleet training programs will be provided to TC and may be made publicly available to help inform future fleet training programs for zero emission trucks.

The Contractor will develop and administer a short survey to training participants to evaluate the utility of the training and to seek feedback for future training programs.

#### 5.6.3 First Responder Training

The Contractor will work with the Vehicle OEM and Infrastructure Provider to coordinate training for local first responders that would be responsible for responding to incidents along the specific dedicated route. An overview of the training program will be provided to TC and may be made publicly available to help inform future training programs for first responders.

The Contractor will develop and administer a short survey to training participants to evaluate the utility of the training, and to seek feedback for future training programs.

#### 5.7 On-Road Pilot Testing

**Decision Gate:** Prior to commencing on-road pilot testing, a go / no-go decision will be made based on the acceptance of the on-road pilot test plan (Section 5.4) and stakeholder feedback from workshops (Section 5.5), technology orientation (Section 5.6), and training (Section 5.6).

If TC accepts the final on-road pilot test plan with a "go" decision, the Contractor will implement and oversee the execution of the on-road pilot test plan over a duration of 12 months. The Contractor will be responsible for the planning, data collection and analysis, and oversight of the on-road pilot. The Contractor will coordinate with the Fleet Operator/Carrier and Vehicle OEM to:

a) transport equipment and vehicles to the test location,

- b) set up data acquisition and instrumentation for the pilot testing,
- c) include the zero emission truck(s) in the fleet's standard operation,
- d) ensure the calibration and proper functioning of the data acquisition systems throughout pilot testing,
- e) monitor the progress of the pilot, ensuring continued mileage accumulation and data acquisition according to the pilot test plan,
- f) work with TC Human Factors Experts to coordinate and administer user experience surveys,
- g) provide status updates, preliminary results (weekly data summaries) and analysis at progress meetings as described in Section 6 Project Governance,
- h) resolve any issues that hinder the progress of the on-road pilot as they arise, and
- i) execute wrap-up tasks at the conclusion of the pilot, including vehicle export and infrastructure decommissioning, if applicable.

## 5.8 Data Analysis and Reporting

The Contractor will analyze the data collected during the pilot project and prepare weekly data summaries, annual reports and presentations to disseminate the results. The analysis and reporting will address the research objectives described in Section 5.1 Research Objectives and Analysis.

#### 6. PROJECT GOVERNANCE

The Contractor will hold a virtual kick-off meeting with the Project Authority to discuss and confirm the high-level project details and timeline. The Contractor will coordinate and lead bi-weekly virtual progress meetings with the Project Team, including: the Project Authority, Canadian Motor Carrier representative, Vehicle OEM, fueling/charging Infrastructure Provider, and provincial representative(s) for providing project updates, preliminary analysis, and interim results. The Contractor must submit minutes of all meetings to the Project Authority within two (2) working days of the meeting for acceptance.

## 7. SCHEDULE OF TASKS AND DELIVERABLES

The schedule of tasks and deliverables shows the approximate delivery date for major milestones and deliverables. For delays greater than 2 months from the estimated timeline, the Contractor must propose an adjusted timeline and receive written approval from the Project Authority to continue with the planned tasks according to the new proposed timeline.

Tasks will be performed as described in Section 5: Scope.

Table 2: Schedule of Tasks and Deliverables

Item	Task	Deliverable / Milestone	SoW Section	Format	Timeline (Contract Award + "#" Months)	
	Task Group 1: Project Governance					
1	1.1	Virtual kick-off meeting with TC. Meeting minutes to be provided to TC.	6	MS Word	0.25	
2	1.2	Bi-weekly virtual progress meetings with the project team. Meeting minutes to be provided to TC.	6	MS Word	Bi-weekly throughout the project	
Task Group 2: Pilot Test Planning and Stakeholder Workshop						
3	2.1	Draft agenda, participant list, presentation deck, and participant survey for the Stakeholder Engagement Workshop	5.5	MS Word	2	

4	2.2	Draft test plan for on-road pilot testing	5.4	MS Word	2	
5	2.3	Final agenda, participant list, presentation deck and participant survey for the Stakeholder Engagement Workshop, addressing TC feedback	5.5	PDF	10	
6	2.4	Stakeholder Engagement Workshop to present the test plan and receive feedback. Workshop presentation decks and a summary of participation and feedback (including workshop survey results) will be provided to TC.	5.5	PDF	10	
7	2.5	Licensing, Permitting, Insurance, Approvals, Exemptions etc.	5.2, 5.3	PDF	10	
8	2.6	Provide zero emission truck(s), comparable conventional truck, and charging/fueling for technical orientation, training, and on-road pilot testing.	5.2	N/A	10	
9	2.7	Final test plan for on-road pilot testing, addressing TC feedback.	5.4	PDF	12	
		Task Group 3: Technical Orientation and Training				
10	3.1	Draft agendas, participant lists, training curricula and participant surveys for technical orientation and training sessions	5.6	Word	7	
11	3.2	Final agendas, participant lists, training curricula and participant surveys for technical orientation and training sessions, addressing TC feedback.	5.6	PDF	8	
12	3.3	Conduct technical orientation to zero emission trucking technology for safety regulators and key stakeholders (summary provided to TC)	5.6	PDF	13	
13	3.4	Conduct training for drivers, maintenance staff, and other fleet staff (summary provided to TC)	5.6	PDF	13	
14	3.5	Conduct training for first responders (summary provided to TC)	5.6	PDF	13	
		Task Group 4: On-Road Pilot Testing				
15	4.1	Go/no-go meeting with the Project Team at least (1) week after delivery of the final pilot test plan. On-road pilot testing will only commence if the decision is "Go".	5.7	-	15	
16	4.2	Execute the on-road pilot testing, including weekly data summary reports and preliminary analysis.	5.7	MS Word	27	
17	4.3	Draft Report on on-road testing including results and analysis (for TC review and comments).	5.8	MS Word	29	

18	4.4	Final Report on on-road testing addressing TC feedback.	5.8	PDF and MS Word	30	
		Task Group 5: Final Stakeholder Workshop and Project Close-Out				
19	5.1	Wrap-up Tasks: Vehicle export if applicable, decommissioning charging/fueling infrastructure if applicable.	5.7	PDF	30	
20	5.2	Draft agenda, participant list, presentation deck, and stakeholder survey for the final Stakeholder Engagement Workshop	5.5	MS Word	30	
21	5.3	Final agenda, participant list, presentation deck, and stakeholder survey for the final Stakeholder Engagement Workshop, addressing TC feedback	5.5	PDF	31	
22	5.4	Organize and lead the final Stakeholder Engagement Workshop to present results to key stakeholders. Stakeholder feedback survey results to be provided to TC.	5.5	PDF	32	

## 8. LANGUAGE OF WORK

The principal language of communications both verbally and written will be English, between the Contractor and Project Authority. The final report will be delivered in English.

#### 9. PUBLICATION OF RESULTS

With the exception of background intellectual property owned by the Contractor, the intention of this project is to support the publication of public research about new transportation technologies and their operation in Canada. Final reports, survey results and other project documents are intended to be publicly released by TC (unless otherwise agreed to, in advance, by TC and the Contractor).

## **ANNEX B - BASIS OF PAYMENT**

(inserted at contract award)