



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

**Bid Receiving - PWGSC / Réception des  
soumissions - TPSGC**  
**11 Laurier St. / 11, rue Laurier**  
**Place du Portage, Phase III**  
**Core 0A1 / Noyau 0A1**  
**Gatineau, Québec K1A 0S5**  
**Bid Fax: (819) 997-9776**

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services 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, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux 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, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

<b>Title - Sujet</b> LIGHT DUTY TRANSIENT DYNAMOMETER	
<b>Solicitation No. - N° de l'invitation</b> K8A21-110150/A	<b>Date</b> 2012-04-26
<b>Client Reference No. - N° de référence du client</b> K8A21-110150	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HS-604-60359	
<b>File No. - N° de dossier</b> hs604.K8A21-110150	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2012-06-07</b>	
<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Bertrand(hs604), Alain	<b>Buyer Id - Id de l'acheteur</b> hs604
<b>Telephone No. - N° de téléphone</b> (819) 956-4025 ( )	<b>FAX No. - N° de FAX</b> (819) 956-5227
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF THE ENVIRONMENT AIR QUALITY RESEARCH 335 RIVER RD OTTAWA Ontario K1A0H3 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Industrial Vehicles & Machinery Products Division  
11 Laurier St./11, rue Laurier  
7B1, Place du Portage, Phase III  
Gatineau  
Québec  
K1A 0S5

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	LIGHT DUTY TRANSIENT AC ENGINE DYN AMOMETER as detailed in the attached Annex A	K8A21	K8A21	1	Each	\$	XXXXXXXXXXXX	See Herein	

---

## TABLE OF CONTENTS

### **PART 1 - GENERAL INFORMATION**

1. Security Requirement
2. Requirement
3. Debriefings

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

1. Standard Instructions, Clauses and Conditions
2. Submission of Bids
3. Enquiries - Bid Solicitation
4. Applicable Laws
5. Improvement of Requirement During Solicitation Period

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

1. Bid Preparation Instructions

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

1. Evaluation Procedures
2. Basis of Selection

### **PART 5 - CERTIFICATIONS**

1. Certifications Precedent to Contract Award

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

1. Security Requirement
2. Financial Capability

### **PART 7 - RESULTING CONTRACT CLAUSES**

1. Security Requirement
2. Requirement
3. Standard Clauses and Conditions
4. Term of Contract
5. Authorities
6. Payment
7. Invoicing Instructions
8. Certifications
9. Applicable Laws
10. Priority of Documents

Solicitation No. - N° de l'invitation

K8A21-110150/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hs604

Client Ref. No. - N° de réf. du client

K8A21-110150

File No. - N° du dossier

hs604K8A21-110150

CCC No./N° CCC - FMS No/ N° VME

---

11. SACC Manual Clauses
12. Preparation for Delivery
13. Shipping Instructions - Delivery and Destination

---

## PART 1 - GENERAL INFORMATION

### 1. Security Requirement

There is no security requirement associated with the requirement.

### 2. Requirement

The requirement is detailed under the attached Annex A.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement, the North American Free Trade Agreement, the Canada-Columbia Free Trade Agreement, the Canada-Peru Free Trade Agreement and the Agreement on Internal Trade.

### 3. Debriefings

After contract award, bidders may request a debriefing on the results of the bid solicitation. Bidders should make the request to the Contracting Authority within **fifteen (15)** working days of receipt of notification that their bid was unsuccessful. The debriefing may be provided in writing, by telephone or in person.

---

## PART 2 - BIDDER INSTRUCTIONS

### 1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual issued by Public Works and Government Services Canada (PWGSC).

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the terms and conditions of the resulting contract.

The 2003 (16/05/11) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

**Subsection 05.4** of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

**Delete:** Bids will remain open for acceptance for a period of not less than **sixty (60) days** from the closing date of the bid solicitation

**Insert:** Bids will remain open for acceptance for a period of not less than **ninety (90) calendar days** from the closing date of the bid solicitation

**Subsection 12** of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

**Delete:** 1. (a) and (b)

**Insert:** 1. Canada may reject a bid where any of the following circumstances is present:

- (a) the Bidder is subject to a Vendor Performance Corrective Measure, under the Vendor Performance Corrective Measure Policy, which renders the Bidder ineligible to bid on the requirement;
- (b) an employee, or subcontractor included as part of the bid, is subject to a Vendor Performance Corrective Measure, under the Vendor Performance Corrective Measure Policy, which would render that employee or subcontractor ineligible to bid on the requirement, or the portion of the requirement the employee or subcontractor is to perform;

### 2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

### **3. Enquiries - Bid Solicitation**

All enquiries must be submitted to the Contracting Authority no later than **seven (7)** calendar days before the bid closing date. Enquiries received after that time may not be answered.

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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

### **4. Applicable Laws**

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

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.

### **5. Improvement of Requirement During Solicitation Period**

Should bidders consider that the specifications, Statement of Work or Purchase Description contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least **seven (7)** calendar days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

## PART 3 - BID PREPARATION INSTRUCTIONS

### 1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

First page of the Request for Proposal signed by the bidder or an authorized representative of the Bidder (1 signed copy)

Section I: Technical Bid (1 hard copy)

Section II: Financial Bid (1 hard copy)

Section III: Certifications and Additional Information (1 hard copy)

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders are encouraged to:

- 1) use paper containing fibre certified as originating from a sustainably-managed forest and/or containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

### Section I: Technical Bid

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

#### 1. Equivalent Products

- 1. Products that are equivalent in form, fit, function, quality and performance to the item(s) specified in the bid solicitation will be considered where the Bidder:

- (a) designates the brand name, model and/or part number of the substitute product;

- 
- (b) states that the equivalent product is fully interchangeable with the item specified;
  - (c) provides complete specifications and descriptive literature for each substitute product;
  - (d) provides compliance statements that include technical specifics showing the equivalent product meets all mandatory performance criteria that are specified in the bid solicitation; and
  - (e) clearly identifies those areas in the specifications and descriptive literature that support the equivalent product's compliance with any mandatory performance criteria.
2. Products offered as equivalent in form, fit, function, quality and performance will not be considered if:
- (a) the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each equivalent product; or
  - (b) the equivalent product fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.
3. In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering an equivalent product to demonstrate, at the sole cost of bidders, that the equivalent product is equivalent to the item specified in the bid solicitation.

## 2. Samples

### 2.1 Equivalent Product - Samples

If the Bidder offers an equivalent product, Canada reserves the right to request a sample from the Bidder in order to determine its equivalency in form, fit, function, quality and performance to the item specified in the bid solicitation.

The Bidder must, upon request from the Contracting Authority, provide a sample to the Technical Authority, transportation charges prepaid, and without charge to Canada, within **fourteen (14)** calendar days from the date of request. The sample submitted by the Bidder will remain the property of Canada and will not be considered as part of the deliverables in any resulting contract. If the sample does not meet the requirements of the bid solicitation or the Bidder fails to comply with the request of the Contracting Authority, the bid will be declared non-responsive.

## Section II: Financial Bid

## 1. Pricing

Bidders must submit their bid in accordance with the Basis of Payment specified in Part 6.

Prices should appear in the “Line Item Detail” only.

Bidders must submit firm prices, in Canadian dollars, Delivered Duty Paid at destination, Incoterms 2000, Canadian Custom Duties and Excise Taxes included where applicable, Goods and Services Tax/Harmonized Sales Tax extra.

## 2. SACC Manual Clauses

SACC Reference	Title	Date
C3011T	Exchange Rate Fluctuation	11/1/10

## Section III: Certifications and Additional Information

### 1. Certifications

Bidders must submit the certifications required under Part 5.

### 2. Additional Information

Canada requests that bidders submit the following information:

#### 2.1 Delivery

While delivery is requested by June 2012, Bidders should indicate the best delivery that could be offered in the “Line Item Detail”.

#### 2.2 Supplier's Representatives

Canada requests that Bidders provide information for the contact person responsible for:

#### General enquiries

Name: \_\_\_\_\_

Telephone No. : \_\_\_\_\_

Facsimile No.: \_\_\_\_\_

E-mail address: \_\_\_\_\_

#### Delivery follow-up

Name: \_\_\_\_\_

Telephone No. : \_\_\_\_\_

Facsimile No.: \_\_\_\_\_

E-mail address: \_\_\_\_\_

---

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

### **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.

#### **1.1 Technical Evaluation**

##### **1.1.2 Mandatory Evaluation Criteria for Equivalent Products and Replaced Part Numbers**

Bidders proposing an equivalent product and/or a replaced part number must meet the following criteria:

In order to be considered for the evaluation of an equivalent product, Bidders must provide all required technical information (as detailed in Part 3, Section I, Article 1 of this RFP) to demonstrate their technical compliance and to confirm form, fit, function and performance of these equivalent products.

In order to be considered for the acceptance of a replaced part number (superseded or obsolete), Bidders must provide a justification/explanation of the replaced part numbers with their bid or upon request as per Part 5, Article 1.2 of this RFP.

#### **1.2 Financial Evaluation**

The price of the bid will be evaluated in Canadian dollars, Delivered Duty Paid at destination, Incoterms 2000, Canadian Custom Duties and Excise Taxes included where applicable, Goods and Services Tax or the Harmonized Sales Tax extra.

### **2. Basis of Selection**

A bid must comply with all requirements of the bid solicitation to be declared responsive. The responsive bid with the lowest evaluated price per item will be recommended for award of a contract.

## PART 5 - CERTIFICATIONS

Bidders must provide the required certifications to be awarded a contract. Canada will declare a bid non-responsive if the required certifications are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify the bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

### 1. Certifications Precedent to Contract Award

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

#### 1.1 Federal Contractors Program - \$200,000 or more

1. The Federal Contractors Program (FCP) requires that some suppliers, including a supplier who is a member of a joint venture, bidding for federal government contracts, valued at \$200,000 or more (including all applicable taxes), make a formal commitment to implement employment equity. This is a condition precedent to contract award. If the Bidder, or, if the Bidder is a joint venture and if any member of the joint venture, is subject to the FCP, evidence of its commitment must be provided before the award of the Contract.

Suppliers who have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

2. If the Bidder does not fall within the exceptions enumerated in 3.(a) or (b) below, or does not have a valid certificate number confirming its adherence to the FCP, the Bidder must fax (819-953-8768) a copy of the signed form LAB 1168, Certificate of Commitment to Implement Employment Equity, to the Labour Branch of HRSDC.

3. The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

(a) ( ) is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada;

(b) ( ) is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;

(c) ( ) is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC (having not bid on requirements of \$200,000 or more), in which case a duly signed certificate of commitment is attached;

(d) ( ) is subject to the FCP, and has a valid certificate number as follows: \_\_\_\_\_ (e.g. has not been declared an ineligible contractor by HRSDC.)

Further information on the FCP is available on the HRSDC Web site.

## **1.2 Submission of Certificate of Conformity - Equivalent Products and/or a Replaced Part Numbers**

If the bidder is offering substitute products that are equivalent in form, fit, function and quality to the Original Equipment Manufacturer (OEM) parts specified herein, the bidder must provide proof by submitting a copy of the certificate of conformity from the Original Equipment Manufacturer (OEM) within seven (7) calendar days upon written request of the Contracting Authority. Bids unable to meet this requirement will be considered non-responsive.

Solicitation No. - N° de l'invitation

K8A21-110150/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hs604

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

K8A21-110150

hs604K8A21-110150

---

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

### **1. Security Requirement**

There is no security requirement associated with the requirement.

### **2. Financial Capability**

**SACC Reference**

A9033T

**Title**

Financial Capability

**Date**

16/05/11

---

## PART 7 - RESULTING CONTRACT CLAUSES

### 1. Security Requirement

There is no security requirement associated with the requirement.

### 2. Requirement

The Contractor must provide the items detailed under the attached Annex A.

#### 2.1 Technical Changes, Substitutes and Alternatives

Any technical changes, equivalent products and alternatives proposed by the Contractor must be evaluated for acceptance by the Technical Authority. Any equivalent products and alternatives must be equivalent in form, fit, function and performance. Equivalent products and alternatives that are offered as equivalent will only be acceptable once they are approved by the Technical Authority as an equivalent. A contract amendment or a completed Design Change/Deviation form will be issued.

Should the Technical Authority not accept the equivalent product or the alternative and the Contractor is unable to meet the technical requirement, Canada may terminate the contract for default in accordance with the general conditions stated in the contract.

### 3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual, (<http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>) Manual issued by Public Works and Government Services Canada.

#### 3.1 General Conditions

2010A (16/05/11) General Conditions - Goods (Medium Complexity) apply to and form part of the Contract.

### 4. Term of Contract

#### 4.1 Complete Delivery

The Contractor must make the delivery as detailed under the "Line Item Detail".

### 5. Authorities

#### 5.1 Contracting Authority

The Contracting Authority for the Contract is:

Alain Bertrand

Supply Specialist

Public Works and Government Services Canada

---

Acquisitions Branch  
 Logistics, Electrical, Fuel and Transportation Directorate  
 "HS" Division  
 Place du Portage, Phase III, 7B1  
 11 Laurier Street  
 Gatineau, QC K1A 0S5  
 Telephone : 819-956-4025  
 Facsimile: 819-956-5227  
 E-mail address: alain.bertrand@pwgsc-tpsgc.gc.ca

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.

## 5.2 Procurement Authority

The Procurement Authority for the contract is:

Name \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

E-mail address: \_\_\_\_\_

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

## 5.3 Contractor's Representatives

### General enquiries

Name: **to be inserted by PWGSC** \_\_\_\_\_

Telephone No. : \_\_\_\_\_

Facsimile No.: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**Delivery follow-up**Name: **to be inserted by PWGSC**

Telephone No. : \_\_\_\_\_

Facsimile No. : \_\_\_\_\_

E-mail address: \_\_\_\_\_

**6. Payment****6.1 Basis of Payment - Firm Price**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm prices, in Canadian dollars, Delivered Duty Paid at destination, Incoterms 2000, Canadian Custom Duties and Excise Taxes included where applicable, Goods and Services Tax/Harmonized Sales Tax extra, as specified in the "Line Item Detail".

**6.2 SACC Manual Clauses**

<b>SACC Reference</b>	<b>Title</b>	<b>Date</b>
C2000C	Taxes - Foreign-based Contractor	30/11/07
C6000C	Limitation of Price	16/05/11
H1000C	Single Payment	12/05/08

**7. Invoicing Instructions**

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified on the invoice is completed.

2. Invoices must be distributed as follows:

(a) The original copy must be forwarded to the Procurement Authority to the following address for certification and payment.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Attention to:** \_\_\_\_\_

(b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

## 8. Certifications

Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the contract. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

## 9. Applicable Laws

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

## 10. Priority of Documents

If there is a discrepancy between the wording of any 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:

- (a) the Articles of Agreement;
- (b) 2010A (16/05/11) General Conditions - Goods (Medium Complexity);
- (c) the Contractor's bid dated to be inserted by PWGSC, as amended to be inserted by PWGSC.

## 11. SACC Manual Clauses

SACC Reference	Title	Date
C2800C	Priority Rating	16/05/11
C2801C	Priority Rating - Canadian-based Contractors	16/05/11
D5545C	ISO 9001:2008 - Quality Management Systems - Requirements (QAC C)	16/08/10
D9002C	Incomplete Assemblies	30/11/07
G1005C	Insurance	12/05/08

## 12. Preparation for Delivery

The Contractor must prepare all items for delivery in accordance with the Contractor's standard commercial practices.

## 13. Shipping Instructions - Delivery at Destination

1. The Contractor must ship the goods prepaid DDP - Delivered Duty Paid (... named place of destination) as specified below. Unless otherwise directed, delivery must be made by the most economical means. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and taxes.

Solicitation No. - N° de l'invitation

K8A21-110150/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

hs604

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

K8A21-110150

hs604K8A21-110150

---

Item 001 - the contact person for delivery is: **to be inserted by PWGSC** . The goods must be delivered to **to be inserted by PWGSC** .

## **Annex A**

### **Light Duty Transient Alternating Current (AC) Engine Dynamometer Specifications**

The Emissions Research and Measurements Section (ERMS) requires a complete light duty AC electric engine dynamometer developing power from 120 to 150 kW, fully capable of conducting transient and steady state engine testing during exhaust emission measurements. The dynamometer controller must have the ability to conduct custom testing either by entering the cycle points or preferably to interface with a computer. In the latter case, all necessary software has to be included in the package.

Technical requirements:

- The dynamometer must be an AC type electrical machine, come complete with a fully Regenerative Drive and a Controller. The control software and/or firmware must be included in the package. The controller must have an option for external data logging.
- The torque-measuring device should be inline and have an accuracy of at least 0.05%. It must be able to withstand the large torque spikes that are encountered as an engine rotates through its power cycles. An equivalent torque measurement technology is acceptable.
- The system must be complete, and include the absorbing AC reversible machine (motor/generator) with forced air cooling and mounting frame, torque measuring flange including all mounting flanges and hardware, mechanical connections to the motor, power and signal cables, regenerative drive, dynamometer and engine throttle controller, all cables, wiring and software. The system must be a turnkey system, only requiring a driveshaft, an engine and connection to the laboratories electrical grid in order to conduct a valid test. The engine, engine mounting, bedplate, Constant Volume Sampling System (CVS), intake system, exhaust gas measurement equipment and data acquisition will be the responsibility of ERMS and are not part of this contract. The successful bidder must provide support so that the system can be fully integrated with the ERMS equipment.
- The included controller must be complete and have all the wiring and software necessary to allow the user to easily input any desired steady state or transient engine testing cycle in order to conduct a valid engine test, without requiring any other additional item, which has not been supplied under this contract. The controller must have a display indicating its current state, any faults and the control mode. The controller must have the ability to interface with an external computer for control and data logging. The ERMS supplied external computer will have an Ethernet port, USB 2 port and RS232 port which can be used for facilitating this interface. If another type of interface is required, the vendor will supply it.
- The contract has to include delivery of the equipment, installation support, on-site start-up and commissioning, electrical and mechanical assistance as well as full assembly, installation and operating documentation.

- The dynamometer and controller must allow both transient testing and steady state testing.
- The control system must be capable of controlling a dynamometer and engine running a Heavy Duty Transient Cycle as specified in the Federal Register, CFR 40 part 86. Heavy duty transient test cycles must be able to be run such that the data will be valid as specified in the CFR 40 part 86-1341, Test cycle validation criteria.
- The system must have a continuous rating of at least 120kW and a torque of at least 250Nm. The AC dynamometer must be able to continuously absorb 120 kW of power from the speed range of 5000 to 12000 revolution per minute (rpm). It must be able to absorb 250 Nm of torque from 100 rpm to 5000 rpm. ERMS must be provided a torque versus speed graph prior to accepting any bid to verify that the torque curve will be appropriate for our requirements.
- The maximum speed must be at least 12000 rpm.
- The overload of the system must be at least 120% for at least 30 seconds.
- The motor, with the connecting flange, fasteners and the torque-measuring device must have a combined inertia of at most 1.5kgm<sup>2</sup>.
- The system must allow for Proportional-Integral-Derivative (PID) control of speed, torque and throttle position of a tested engine.
- The controller must have built-in safety features and alarms such as over speed, excessive torque, high AC motor bearings temperatures, off-trace range and high engine water temperature.
- The contract will be for a product that has at least a three year warranty. Since the equipment may not be installed at our site immediately the warranty must be extended by the time it takes for the equipment to be electrically installed at our site. This period shall not exceed two years of storage plus three years of warranty.
- The successful bidder must demonstrate that they are a competent supplier of equipment in the field of engine emission testing. To do this they must provide examples of previous installations that they have supplied and show that these have been reliable. ERMS may reject any bid if it is found that the bidder has had delivery and/or reliability problems with other installations. If ERMS finds technical inaccuracies in the information obtained from the vendor it may also choose to reject the bid. If the bidder has no previous experience providing engine dynamometer equipment for emissions testing ERMS may reject the bid.