

**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**

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**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>Title - Sujet</b> LIGHT DUTY TRANSIENT DYNAMOMETER	
<b>Solicitation No. - N° de l'invitation</b> K8A21-110150/A	<b>Amendment No. - N° modif.</b> 002
<b>Client Reference No. - N° de référence du client</b> K8A21-110150	<b>Date</b> 2012-06-07
<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 2012-06-19</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>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<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/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

This modification to the solicitation is issued to provide the following clarifications.

Question #1:

Engine Throttle Controller. Does ERMS need the throttle controller and actuator or simply the ability to connect to the throttle controller?

Answer to Question #1: ERMS does not require a throttle actuator. It is acceptable to include an actuator. ERMS requires the controller to have the ability to control a throttle actuator.

Question #2:

Wiring. What is the anticipated distance in which you need wiring from the regenerative drive to the dynamometer?

Answer to Question #2: The distance for the wiring from the regenerative drive to the dynamometer is 40 meters.

Question# 3:

- a.) Torque @ Zero (or lowest testing) RPM
- b.) Maximum Torque @ RPM (Nm or ft\*lb)
- c.) Maximum Power @ RPM (kW or HP)
- d.) Power @ Maximum RPM
- And If Specified
- d.i.) Maximum change in RPM/SEC
- d.ii.) Maximum Load Inertia (ft<sup>2</sup>lbm)
- e.) Is a load bank or generation drive preferred?

Answers to Question #3:

As stated in Annex "A" of the RFP:

- a.) Minimum Zero speed torque: 180 Nm.
- b.) Minimum required Maximum torque: 250 Nm, 100 - 5000 rpm speed range.
- c.) Minimum required Maximum power: 120 kW to 150 kW, 5000-12000 rpm speed range, capable of a minimum 120% or greater overload (144 - 180 kW) for 30 seconds. The larger capacity (150 kW) is preferred.
- d.): Minimum required Maximum power: 120 kW to 150 kW at 12000 rpm.
- d.i.) The maximum change in rpm/sec is a value that is largely engine dependant and is not specified. The maximum rate of change of acceleration may be higher then 2500 rpm/s<sup>2</sup>.
- d.ii.) Maximum connected inertia 9.0 kg-m<sup>2</sup> (214) ft<sup>2</sup>lbm.
- e.) A fully Regenerative drive is required. A load bank is NOT acceptable.

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**Question #4:**

In Annex "A" of the RFQ, page 2, paragraph 2 it states

"The control system must be capable of controlling a dynamometer and engine running a Heavy Duty Transient Cycle..."

We will be providing the scope of supply to perform the HDDT Test Sequence, but are assuming the data collection, correlation, statistical analysis will be performed by the customer and control set points for dyno speed and throttle position will be sent to our dyno system for control.

Is our assumption correct?

What type (model & manufacturer) of bench is going to be integrated?

**Answer to Question #4:**

That assumption is correct. The dynamometer and controller must be capable of responding to the speed and torque demands as required by the Heavy Duty Transient Cycle. Our system will provide the set points to the dynamometer controller. The controller is expected to achieve the speed and torque set points and have an error that is within the acceptable levels as specified in the CFR 40 part 86-1341. The controller will achieve this by controlling a throttle controller that is connected to the engine and controlling the drive connected to the AC dynamometer. Our system will collect the torque and speed data from the dynamometer controller and do the statistical analysis.

The bench has been fabricated internally at Environment Canada.