

**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving  
PWGSC  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5  
Bid Fax: (905) 615-2095**

**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> Relative Humidity Sensors	
<b>Solicitation No. - N° de l'invitation</b> K3D33-121413/A	<b>Date</b> 2014-04-24
<b>Client Reference No. - N° de référence du client</b> K3D33-121413	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$TOR-015-6592	
<b>File No. - N° de dossier</b> TOR-3-36151 (015)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-06-04</b>	<b>Time Zone 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> Abela, Aaron	<b>Buyer Id - Id de l'acheteur</b> tor015
<b>Telephone No. - N° de téléphone</b> (905) 615-2061 ( )	<b>FAX No. - N° de FAX</b> (905) 615-2060
<b>Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:</b> DEPARTMENT OF THE ENVIRONMENT 4905 Dufferin St. Downsview Ontario M3H5T4 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address  
Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) 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>

**Issuing Office - Bureau de distribution**  
Public Works and Government Services Canada  
Ontario Region  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5

Solicitation No. - N° de l'invitation

K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

tor015

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

K3D33-121413

File No. - N° du dossier

TOR-3-36151

CCC No./N° CCC - FMS No/ N° VME

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See attached ...

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

---

## **TABLE OF CONTENTS**

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

1. Introduction
2. Summary
3. Debriefings

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

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

### **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 Required Precedent to Contract Award

### **PART 6 - RESULTING CONTRACT CLAUSES**

1. Requirement
2. Standard Clauses and Conditions
3. Term of Contract
4. Authorities
5. Payment
6. Invoicing Instructions
7. Certifications
8. Applicable Laws
9. Priority of Documents
10. Insurance – Specific Requirements
11. SACC Manual Clauses

#### **List of Annexes:**

Annex "A"	Requirement
Annex "B"	Basis of Payment
Annex "C"	Insurance Requirements

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

---

Annex "D"	Federal Contractors Program for Employment Equity - Certification
Annex "E"	Certification
Annex "F"	Evaluation Criteria

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

## PART 1 - GENERAL INFORMATION

### 1. Introduction

The bid solicitation is divided into six 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: includes the certifications to be provided;
- Part 6 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Requirement, the Basis of Payment, Insurance Requirements, Evaluation Criteria and Federal Contractors Program for Employment Equity - Certification.

### 2. Summary

Environment Canada (EC) requires unheated relative humidity (RH) sensors and heated RH sensors for use in their Reference Climate Stations (RCS), Surface Weather (SWX), and partner networks. To ensure instrument continuity and data homogeneity, EC intends to use the same model for a ten (10) year period. Each unit must be delivered with a 12-month warranty.

The sensors are used to support EC's mandate to forecast daily weather conditions and warnings, and provide detailed meteorological information to all of Canada. These sensors will augment on-going improvements and expansions being made to the radar, surface, marine and lightning detection networks.

All heated RH sensors proposed to Canada must operate satisfactorily without heating.

The contract period will be for a period of ten (10) years from the date of award. EC requires the quantities detailed below:

#### Category 1) Unheated RH Sensors

Contract Period

Year	Contract Period	Firm Quantity	Optional Quantity
1	Date of Contract Award- March 31, 2015	32 ea.	up to 70 ea.
2	April 1, 2015 - March 31, 2016	30 ea.	up to 40 ea.
3	April 1, 2016 - March 31, 2017	30 ea.	up to 40 ea.

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

4	April 1, 2017 - March 31, 2018	0 ea.	up to 40 ea.
5	April 1, 2018 - March 31, 2019	0 ea.	up to 40 ea.
6	April 1, 2019 - March 31, 2020	0 ea.	up to 40 ea.
7	April 1, 2020 - March 31, 2021	0 ea.	up to 40 ea.
8	April 1, 2021 - March 31, 2022	0 ea.	up to 40 ea.
9	April 1, 2022 - March 31, 2023	0 ea.	up to 40 ea.
10	April 1, 2023 - March 31, 2024	0 ea.	up to 40 ea.

## Category 2) Heated RH Sensors

### Contract Period

Year	Contract Period	Firm Quantity	Optional Quantity
1	Date of Contract Award - March 31, 2015	2 ea.	up to 30 ea.
2	April 1, 2015 - March 31, 2016	0 ea.	up to 30 ea.
3	April 1, 2016 - March 31, 2017	0 ea.	up to 30 ea.
4	April 1, 2017 - March 31, 2018	0 ea.	up to 30 ea.
5	April 1, 2018 - March 31, 2019	0 ea.	up to 30 ea.
6	April 1, 2019 - March 31, 2020	0 ea.	up to 30 ea.
7	April 1, 2020 - March 31, 2021	0 ea.	up to 30 ea.
8	April 1, 2021 - March 31, 2022	0 ea.	up to 30 ea.
9	April 1, 2022 - March 31, 2023	0 ea.	up to 30 ea.
10	April 1, 2023 - March 31, 2024	0 ea.	up to 30 ea.

It is intended to award up to 2 contracts where 1 contract will be awarded for the unheated RH sensor category and 1 contract will be awarded for the heated RH sensor category.

The proposed unheated and heated RH sensor(s) must be new (not refurbished or prototype item), commercially-off-the-shelf (COTS) model(s).

The proposed unheated RH sensors and the proposed heated RH sensors will be evaluated separately.

The proposed heated RH sensors must operate in both the heater-enabled configuration as well as the heater-disabled configuration in order to be considered. The heated RH sensors can be either heated continuously (also known as warmed probes) or intermittently (heated probes). If Bidders are proposing to bid on both Heated and Unheated RH Sensors, Bidders must provide the same model for both.

Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standing Instructions 2003.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

There is a Federal Contractors Program (FCP) for employment equity requirement associated with this procurement; see Part 5 - Certifications, Part 6 - Resulting Contract Clauses and the annex named Federal Contractors Program for Employment Equity - Certification

### **3. Debriefings**

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 of receipt of the results of the bid solicitation process. The debriefing may be 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* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

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.

The 2003 (2014-03-01) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days

Insert: one hundred and eighty (180) days

#### **1.1 SACC Manual clause**

B1000T (2007-11-30) Condition of Material

### **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.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

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

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) 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

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

---

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, Canada.

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.

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

#### **1. Bid Preparation Instructions**

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

Section I: Technical Bid (3 hard copies)

Section II: Financial Bid (2 hard copies)

Section III: Certifications (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

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

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and 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 demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

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.

## **Section II: Financial Bid**

- 1.1** Bidders must submit their financial bid in accordance with the Annex "B" - Basis of Payment. The total amount of Applicable Taxes must be shown separately.

## **Section III: Certifications**

Bidders must submit the certifications required under Part 5.

## **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 evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

### **1.1 Technical Evaluation**

#### **1.1.1 Mandatory Technical Criteria**

See Annex "E", PART A. Mandatory Technical Criteria.

#### **1.1.2 Point Rated Technical Criteria**

See Annex "E", Part B - Point Rated Evaluation Criteria

### **1.2 Financial Evaluation**

#### **1.2.1 Mandatory Financial Criteria**

Bidders must provide firm unit prices, in Canadian funds, transportation included, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

For those bidders submitting bids for Category 1, Unheated RH Sensors, bidders must complete and submit Annex B - Category 1: Unheated RH Sensors.

For those bidders submitting bids for Category 2, Heated RH Sensors, bidders must complete and submit Annex B - Category 2: Heated RH Sensors.

**1.2.2** The price used in the evaluation will be the Total Bid Evaluated Price for each RH sensor model proposed, which is calculated as follows:

(i) Total Bid Evaluated Price is the sum of the Extended Prices of each contract year including both firm and optional quantities.

(ii) Extended Price for each contract year is the Firm Quantities or the maximum Optional Quantities multiplied by proposed Firm Unit Price of each contract year.

(iii) The Total Bid Evaluated Price for the Heated RH Sensors and the Total Bid Evaluated Price for the Unheated RH Sensors will be calculated and evaluated separately.

## **2. Basis of Selection - Highest Combined Rating of Technical Merit and Price**

1. To be declared responsive, a bid must:
  - (a) comply with all the requirements of the bid solicitation; and
  - (b) meet all mandatory criteria.
2. Bids not meeting (a) or (b) will be declared non-responsive
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60% for the technical merit and 40% for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of available points multiplied by the ratio of 60%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40%
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)

	Bidder 1	Bidder 2	Bidder 3
<b>Overall Technical Score</b>	115/135	89/135	92/135
<b>Bid Evaluated Price</b>	\$55,000.00	\$50,000.00	\$45,000.00
<b>Calculations</b>			
<b>Technical Merit Score</b>	115/135 x 60 = 51.11	89/135 x 60 = 39.56	92/135 x 60 = 40.89
<b>Pricing Score</b>	45/55 x 40 = 32.73	45/50 x 40 = 36.00	45/45 x 40 = 40.00
<b>Combined Rating</b>	83.84	75.56	80.89
<b>Overall Rating</b>	1st	3rd	2nd

## PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and documentation to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. 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 during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with this request will also render the bid non-responsive or will constitute a default under the Contract.

### 1. Certifications Required Precedent to Contract Award

#### 1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions [2003](#). The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

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

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 ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from [Employment and Social Development Canada \(ESDC\) - Labour's](#) website.

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.

### **1.3 OEM Certification**

- 1.3.1 Any Bidder that is not the Original Equipment Manufacturer (OEM) for every item of hardware proposed as part of its bid is required to submit the OEM's certification regarding the Bidder's authority to provide and maintain the OEM's hardware, which must be signed by the OEM (not the Bidder). No Contract will be awarded to a Bidder who is not the OEM of the hardware it proposes to supply to Canada, unless the OEM certification has been provided to Canada. Bidders are requested to use the OEM Certification Form included with the bid solicitation Annex E. Although all the contents of the OEM Certification Form are required, using the form itself to provide this information is not mandatory. For Bidders/OEMs who use an alternate form, it is in Canada's sole discretion to determine whether all the required information has been provided. Alterations to the statements in the form may result in the bid being declared non-responsive.
- 1.3.2 If the hardware proposed by the Bidder originates with multiple OEMs, a separate OEM certification is required from each OEM.
- 1.3.3 For the purposes of this bid solicitation, OEM means the manufacturer of the hardware, as evidenced by the name appearing on the hardware, on all accompanying documentation, on mandatory certification reports, and on any support software

## **PART 6 - RESULTING CONTRACT CLAUSES**

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

### **1. Requirement**

The Contractor must provide the firm quantities of the Relative Humidity Sensors within the required delivery period in accordance with the Requirement at Annex "A", and Annex "B".

#### **1.1 Optional Goods and/or Services**

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex "B" Basis of Payment of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

## **1.2 Procedures for Design Change/Deviations**

The Contractor must complete Part 1 of form PWGSC-TPSGC 9038, Design Change/Deviation, and forward one (1) copy to the Technical Authority and one (1) copy to the Contracting Authority.

## **2. 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](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>) issued by Public Works and Government Services Canada.

### **2.1 General Conditions**

2030 (2014-03-01), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

### **2.2 Supplemental General Conditions**

4001 (2013-01-28) Supplemental General Conditions – Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

## **3. Term of Contract**

### **3.1 Period of the Contract**

The period of the Contract is from (Date of Contract Award) to March 31, 2024 inclusive.

### **3.2 Delivery Date**

#### **Category 1 Unheated RH Sensors (if applicable)**

3.2.1 For Year 1, 32 sensors must be delivered on or before March 31, 2015. If the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.2 For Year 2, 30 sensors must be delivered on or before March 31, 2016. If the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.3 For Year 3, 30 sensors must be delivered on or before March 31, 2017. If the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.4 For Year 4, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.5 For Year 5, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.6 For Year 6, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.7 For Year 7, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.8 For Year 8, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.9 For Year 9, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.10 For Year 10, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

**Category 2 Heated RH Sensors** (if applicable)

3.2.1 For Year 1, 2 sensors must be delivered on or before March 31, 2015. If the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.2 For Year 2, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.3 For Year 3, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.4 For Year 4, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.5 For Year 5, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.6 For Year 6, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.7 For Year 7, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.8 For Year 8, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.9 For Year 9, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

3.2.10 For Year 10, if the optional quantities are exercised, the optional quantities must be delivered within \_\_\_\_\_ calendar days of notification by the Contracting Authority.

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

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#### **4. Authorities**

##### **4.1 Contracting Authority**

The Contracting Authority for the Contract is:

Name: Aaron Abela  
Title: Supply Specialist  
Public Works and Government Services Canada  
Acquisitions Branch  
Address: 33 City Centre Drive, Suite 480  
Mississauga, Ontario. L5B 2N5  
Canada.

Telephone: 905-615-2061  
Facsimile: 905-615-2060  
E-mail address: aaron.abela@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.

##### **4.2 Project Authority** (TBA at time of Contract Award)

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone: \_\_\_\_-\_\_\_\_-\_\_\_\_\_  
Facsimile: \_\_\_\_-\_\_\_\_-\_\_\_\_\_  
E-mail address: \_\_\_\_\_

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.

##### **4.3 Contractor's Representative** (TBA at time of Contract Award)

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

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Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

## **5. Payment**

### **5.1 Basis of Payment**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit price, as specified in in Annex "B" - Basis of Payment for a total cost of \$ \_\_\_\_\_ insert the amount at contract award). Customs duties are included and Applicable Taxes are extra.

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.

### **5.2 Limitation of Price**

SACC Manual clause C6000C (2011-05-16) Limitation of Price

### **5.3 Multiple Payment**

SACC Manual Clause H1001C (2008-05-12) Multiple Payment

## **6. 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 in the invoice is completed.
2. Invoices must be distributed as follows:
  - (a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
  - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

## **7. Certifications**

### **7.1 Compliance**

Compliance with the certifications and related documentation 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, provide the related documentation or if 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.

## **8. Applicable Laws**

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

## **9. 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) the supplemental general conditions 4001 (2013-01-28) Supplemental General Conditions - Hardware Purchase, Lease and Maintenance;
- (c) the general conditions 2030 (2014-03-01), General Conditions - Higher Complexity - Goods;
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Insurance Requirements
- (g) Annex D, Federal Contractors Program for Employment Equity - Certification
- (h) the Contractor's bid dated \_\_\_\_\_

## **10. Insurance – Specific Requirements**

The Contractor must comply with the insurance requirements specified in Annex C. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

## **11. SACC Manual Clauses**

B1501C (2006-06-16) Electrical Equipment

A9068C (2010-01-11) Government Site Regulations

## **ANNEX "A"**

### **REQUIREMENT**

#### **1. BACKGROUND:**

Environment Canada (EC) is mandated to forecast daily weather conditions and warnings, and provide detailed meteorological information to Canadians. The Meteorological Service of Canada (MSC), a Branch of Environment Canada, operates and maintains various meteorological monitoring networks across Canada in support of this mandate.

The MSC meteorological monitoring networks must meet rigorous standards for instrumentation and protocols for station operation and maintenance. Improvements and expansions are being made to the Surface Weather (SWX), Reference Climate Station (RCS) and Marine – Automatic Volunteer Observing Ships (AVOS) sites. The network improvements include the replacement of relative humidity sensors (RH sensors).

#### **2. OBJECTIVE:**

Environment Canada intends to purchase RH sensors for use in its RCS, SWX and AVOS networks by establishing one or more contracts with either the original equipment manufacturer(s) (OEM) or distributor(s). The contract(s) will cover the supply of RH sensors and related technical support for these networks, for a ten (10) year period.

To ensure instrument continuity and data homogeneity, Environment Canada intends to use the same RH sensor model(s).

The Contractor must make every reasonable effort to prepare themselves to immediately supply product upon contract award in order to satisfy operational needs.

#### **3. SCOPE**

Environment Canada's required quantities are detailed in Annex B Basis of Payment.

The Contractor must provide technical support for the duration of the contract period. This service includes the following:

- Revisions to technical documentation; and
- Technical information and advice.

#### **4. RELATVIE HUMIDITY SENSOR TECHNICAL REQUIREMENTS**

- 4.1 The RH sensor must be a new commercial-off-the-shelf (COTS) instrument and not a refurbished item. All heated and unheated relative humidity sensors must operate satisfactorily without heating or chemical purge.

##### **4.2 Operating RCS, SWX and AVOS Network Environments**

The RH sensor must operate satisfactorily in the following land, coastal and marine environments:

4.2.1 RCS and SWX land sites: These sites are located inland and away from Canada's coasts. Some of these sites are easily accessible while others are located in remote areas. Sites that are in remote areas are typically costly for Environment Canada to access for maintenance and support.

4.2.2 RCS and SWX coastal sites: these sites are located along Canada's coasts where the sensors are exposed to fresh or salt water spray and freezing spray on a frequent basis.

4.2.3 Marine – AVOS sites: These sites are located on ships operating in fresh water and salt water environments where the sensors are exposed to fresh water and salt water spray, freezing spray and vessel vibrations.

#### **5. DOCUMENTATION**

- 5.1 The Contractor must provide the following documentation in relation to the RH sensors in hardcopy or portable document format (.pdf) upon delivery.

- RH Sensor product technical specifications
- All operational requirement information for all delivered RH sensor(s).
- User manual(s) explaining the general usage of the RH sensors; Installation manual and related documentation describing procedures for installing verifying sensor performance, maintaining, troubleshooting and repairing sensors, as applicable
- The Contractor must keep accurate and complete quality-related records pertaining to the product and, upon request, make these records available to PWGSC Contracting Authority in electronic PDF format.

5.2 At the time of delivery, each sensor must be accompanied by certificate of calibration from an ISO IEC 17025:2005 (or later version) accredited facility in a hard copy or in an electronic portable document format (".PDF") copy. Calibration Laboratory Assessment Services (CLAS), National Institute of Standards and Technology (NIST) and American Association for Laboratory Accreditation (A2LA) accredited calibration laboratories, or equivalent are acceptable calibration facilities. The calibration certificate must reflect the results of the calibration of each individual sensor. The calibration must be conducted at one temperature point, between 20°C and 24°C. The calibration must be valid for at least one year.

5.3 The Contractor must grant Environment Canada the right to provide intranet availability of the manuals (including revised documents) to Environment Canada's staff and to print copies of the manual as needed to meet operational requirements.

5.4 Upon Contract award, the Contractor must provide a catalogue (electronic portable document format preferred) of parts, accessories and cable ends with current pricing (to be updated annually or as needed for the duration of the contract at no charge to Canada.

5.6 The Contractor must provide operating and user manuals and other related documentation describing procedures for installing, verifying performance, maintaining and repairing the RH sensors with each new shipment of sensors.

5.7 RH sensor manuals must be provided in English and French. The manuals must include sufficient text and graphical content to completely, accurately, and clearly provide the information required by Environment Canada-MS technical staff to ensure the continuous operation of the RH sensors in an operational environment.

5.8 The first shipment of the RH sensors must include one hard copy of the manual and one copy in electronic text format. The electronic text format must be in portable document format (.PDF) unless otherwise approved by the Technical Authority.

- The documentation provided with the first shipment may be in English only.
- The Contractor must supply all the identical documentation in French within six (6) months of contract award. The French documentation may be provided in electronic text format only.

- Subsequent shipments may have documentation provided in electronic text portable document format (PDF).
- Calibration certificates may be provided in English or French, as issued from the calibration facility. Where the original language of the certificate is neither English nor French, the information on the certificate must be provided in English or French.

## **6. TECHNICAL SUPPORT**

The Contractor must provide the following technical support services for the RH sensors at no charge to Canada during the contract period. The support may be rendered by the OEM(s), the distributor(s) or their technical agent(s).

### **6.1 RH Sensor Upgrades**

The Contractor must provide Environment Canada Project Authority with notification of any modifications, improvements and upgrades to the RH sensor model and the sensor accessories purchased by Environment Canada, prior to implementing the changes. The associated notification must clearly detail any effects of the change(s) on the performance of the RH sensor. Environment Canada Project Authority reserves the right to accept or reject the proposed modifications to the RH sensor models or accessories being supplied under this contract(s).

### **6.2 Revisions to technical documentation**

The Contractor must advise Environment Canada of updates to existing documents related to the RH sensor models or accessories delivered to Environment Canada. Revised documents must reflect changes to the RH sensor hardware, software, or to the procedures related to operation, installation, maintenance and repair. An electronic version of the revision in portable document format (.PDF) must be made available to Environment Canada Project Authority.

## **7. TECHNICAL SPECIFICATIONS – Unheated RH Sensor**

Deliverable: The Unheated RH Sensor must meet or exceed each of the specifications outlined below:

### **7.1 Operating Environment**

- 7.1.1 Temperature: The sensor must operate outdoors without performance deterioration within -40°C to +50°C.
- 7.1.2 Humidity: The sensor must operate outdoors without performance deterioration within 0% to 100%RH.

- 
- 7.1.3 Corrosion: The sensor must operate outdoors without performance deterioration in an environment with salt mist or fog. *The sensor must comply with standards that demonstrate the performance in such environments, Acceptable standards include: 60068-2-52 severity 1, and MIL-STD-810G Method 509, or equivalent.*
- 7.2 Accuracy Uncertainty
- 7.2.1 The measurement uncertainty of sensors must be less than or equal to:
- (a) 3% RH for  $0\% \leq RH \leq 90\%$ .
  - (b) 4% RH for  $90\% < RH \leq 100\%$ .
- 7.3 Response Time
- 7.3.1 The time constant (i.e. 1/e (or 63%) response time) must be less than or equal to 25 seconds at +20°C in still air with filter.
- 7.4 Long Term Stability
- 7.4.1 The annual measurement drift must be less than or equal to 1.5%RH.
- 7.5 Measurement Range
- 7.5.1 The sensor must measure and report relative humidity over the range of 0% to 100% RH.
- 7.6 Output
- 7.6.1 The sensor output must be at least one of the following:
- (a) A DC voltage within 0 to 5 VDC, indicating RH; or
  - (b) A digital interface: SDI-12
- 7.7 Calibration
- 7.7.1 Each sensor must be calibrated at a facility accredited to ISO/IEC 17025:2005 (or later) or equivalent
- 7.8 Dust and Water Tight Integrity
- 7.8.1 The RH sensor must prevent ingress of dust
- 7.8.2 The RH sensor must resist ingress of water
- 7.9 Electromagnetic interference (EMI) / Radio Frequency Interference (RFI)
- 7.9.1 The RH sensor must include documentation that demonstrates that the RH Sensor complies with EN 61326-1:2005, or equivalent standard.
- 7.10 Weight of the sensor
- 7.10.1 The RH sensor must weigh 500 g or less
- 7.11 Dimensions of the probe(s)
- 7.11.1 Humidity sensor probe
- (a) Length: 300 mm or less.
  - (b) Diameter: 40 mm or less.
- 7.12 Mean Time Between Failure (MTBF)
- 7.12.1 The RH sensor must operate with a MTBF of 10 years or more.
- 7.13 Survivability
- 7.13.1 Temperature: The RH sensor must return to normal operation within specifications after 24 hours exposure (while operating) to temperatures outside of the normal operating range of -40°C to +50°C but within the range from -60°C to +60°C, without external intervention.
- 7.13.2 Thermal Shock: must be the following:
- (a) The RH sensor must be operational after being exposed to a sudden temperature change from +20°C to -40°C and from +20°C to +50°C. "Sudden" means a change in environment occurring in less than one minute, but lasting at least one hour at the new temperature.
  - (b) The RH sensor must resume operation after remaining without power for a period of at least one hour at a temperature of -40°C.
- 7.13.3 Vibration standards must comply with one of the following:

(a) AECTP-400 Edition 3 NATO standard on loose cargo.

Or

(b) MIL-STD-202G Method 201 or 60068-2-6 or equivalent standard for vibration.

7.13.4 Mechanical Shock: The RH sensor must comply with AECTP-400 Edition 3 NATO standard on handling, "or equivalent" standard for handling (Acceptable standards include: MIL-STD-202G Method 203C (Random Drop), or 207B (High Impact Shock) or 213B (Shock).

#### 7.14 Maintenance

7.14.1 The scheduled preventive maintenance interval recommended by the manufacturer must be 12 months or longer from the date the sensor began operation.

#### 7.15 Continuous Operation

7.15.1 All sensors must be capable of operating continuously, unattended, except for scheduled maintenance visits.

#### 7.16 Power Requirements:

7.16.1 The unheated version of a RH sensor model must operate without performance degradation when supplied with a voltage equal to or more than 10 VDC and equal to or less than 15 VDC (power supplied from a standard data logger device). Total current drawn by the sensor in the unheated version must be less than or equal to 20 mA (in the full operating supplied voltage range).

## 8. TECHNICAL SPECIFICATIONS – Heated RH Sensor

Deliverable: The Heated RH Sensor must meet or exceed each of the specifications outlined below:

### 8.1 Operating Environment

8.1.1 Temperature: The sensor must operate outdoors without performance deterioration within -40°C to +50°C.

8.1.2 Humidity: The sensor must operate outdoors without performance deterioration within 0% to 100%RH.

8.1.3 Corrosion: The sensor must operate outdoors without performance deterioration in an environment with salt mist or fog. *The sensor must comply with standards that demonstrate the performance in such environments, Acceptable standards include: 60068-2-52 severity 1, and MIL-STD-810G Method 509, or equivalent*

### 8.2 Accuracy Uncertainty

8.2.1 The measurement uncertainty of sensors must be less than or equal to:

(c) 3% RH for  $0\% \leq RH \leq 90\%$ .

(d) 4% RH for  $90\% < RH \leq 100\%$ .

### 8.3 Response Time

8.3.1 The time constant (i.e. 1/e (or 63%) response time) must be less than or equal to 25 seconds at +20°C in still air with filter.

### 8.4 Long Term Stability

8.4.1 The annual measurement drift must be less than or equal to 1.5%RH.

### 8.5 Measurement Range

8.5.1 The sensor must measure and report relative humidity over the range of 0% to 100% RH.

### 8.6 Output

8.6.1 The sensor output must be at least one of the following:

(a) A DC voltage within 0 to 5 VDC, indicating RH

(b) A digital interface: SDI-12

## 8.7 Calibration

- 8.7.1 Each sensor must be calibrated at a facility accredited to ISO/IEC 17025:2005 (or later) or equivalent

## 8.8 Dust and Water Tight Integrity

- 8.8.1 The RH sensor must prevent ingress of dust
- 8.8.2 The RH sensor must resist ingress of water

## 8.9 Electromagnetic interference (EMI) / Radio Frequency Interference (RFI)

- 8.9.1 The RH sensor must include documentation that demonstrates that the RH Sensor complies with EN 61326-1:2005, or equivalent standard.

## 8.10 Weight of the sensor

- 8.10.1 The RH sensor must weigh 500 g or less

## 8.11 Dimensions of the probe(s)

- 8.11.1 Humidity sensor probe
  - (a) Length: 300 mm or less.
  - (b) Diameter: 40 mm or less.
- 8.11.2 If a temperature sensor probe is required as part of a complete and functional heated sensor, it must meet the following dimensions:
  - (a) Length: 160 mm or less.
  - (b) Diameter: 6 mm or less.The Contractor must include the temperature sensor probe as an accessory in the deliverables at no additional charge.

## 8.12 Mean Time Between Failure (MTBF)

- 8.12.1 The RH sensor must operate with a MTBF of 10 years or more.

## 8.13 Survivability

- 8.13.1 Temperature: The RH sensor must return to normal operation within specifications after 24 hours exposure (while operating) to temperatures outside of the normal operating range of -40°C to +50°C but within the range from -60°C to +60°C, without external intervention.
- 8.13.2 Thermal Shock: must be the following:
  - (a) The RH sensor must be operational after being exposed to a sudden temperature change from +20°C to -40°C and from +20°C to +50°C. "Sudden" means a change in environment occurring in less than one minute, but lasting at least one hour at the new temperature.
  - (b) The RH sensor must resume operation after remaining without power for a period of at least one hour at a temperature of -40°C.
- 8.13.3 Vibration standards must comply with one of the following:
  - (a) AECTP-400 Edition 3 NATO standard on loose cargo.Or
  - (b) MIL-STD-202G Method 201 or 60068-2-6 or equivalent standard for vibration.
- 8.13.4 Mechanical Shock: The RH sensor must comply with AECTP-400 Edition 3 NATO standard on handling, "or equivalent" standard for handling (Acceptable standards include: MIL-STD-202G Method 203C (Random Drop), or 207B (High Impact Shock) or 213B (Shock).

## 8.14 Maintenance

- 8.14.1 The scheduled preventive maintenance interval recommended by the manufacturer must be 12 months or longer from the date the sensor began operation.

## 8.15 Continuous Operation

- 8.15.1 All sensors must be capable of operating continuously unattended when heated and when operating without heat, except for scheduled maintenance visits.

## 8.16 Power Requirements:



Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

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8.16.1 The proposed sensor must meet a) and b) or c)

- a) The Heated version of a RH sensor model must operate without performance degradation when supplied with a voltage equal to or more than 10 VDC and equal to or less than 15 VDC (power supplied from a standard data logger device); and
- b) Total current drawn by the sensor in the unheated version must be less than or equal to 20 mA (in the full operating supplied voltage range).

OR

The Heated version of a RH sensor model must operate without performance degradation when supplied by any AC/AC or AC/DC adapters needed to accommodate the additional power requirements in the deliverables. Such an adapter must operate from 115V AC 60 Hz, and must be electrically isolated from the sensor.

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

## ANNEX "B"

### BASIS OF PAYMENT

#### Category 1: Unheated RH Sensors

The firm unit price must be an all inclusive price, in accordance with Annex "A" - Requirement, in Canadian funds including 12 month warranty, Canadian customs duties, excise taxes, transportation included F.O.B. destination. The total amount of Goods and Services Tax (GST) or Harmonized Sales Tax (HST) is not included.

Firm unit price also includes the cost of the required accessories, components, adaptors, probe for a complete and functional sensor model, also included are test documents, calibration certificates and technical manual including all packaging, shipping and freight.

The Contractor must provide technical information and advice, as well as revisions to the technical documents during the contract period at no charge.

Canada reserves the right to advance or delay the delivery of various firm quantities, from time to time, during the contract period.

#### 1.0 Firm Quantities

Contract Year	Delivery Period	Firm Quantities	Firm Unit Price (GST/HST extra)	Extended Price (GST/HST extra)
1	Date of Contract Award - March 31, 2015	32 ea x	\$ _____ =	\$ _____
2	During April 1, 2015 - March 31, 2016	30 ea x	\$ _____ =	\$ _____
3	During April 1, 2016 - March 31, 2017	30 ea x	\$ _____ =	\$ _____
TOTAL: \$				_____

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

## 2.0 Optional Quantities

Canada may purchase any or all of the optional goods at any time during the period of the contract. The optional quantities may be exercised in various quantities, from time to time, during the contract period.

Canada reserves the right to advance or delay the purchase of various optional quantities between contract years.

If the optional quantities are exercised, the firm unit price for the optional quantities will be the lessor of either:

- i) the prices detailed below;
- ii) the Contractor's published price list in effect at the time the optional quantities are exercised, less the quantity discount at \_\_\_\_%, or
- iii) price to be negotiated with Canada at the time the optional quantity is exercised.

Contract Year	Delivery Period	Optional Quantities	Firm Unit Price (GST/HST extra)	Extended Price (GST/HST extra)
1	Date of Contract Award - March 31, 2015	Up to 70 ea x \$	\$	\$
2	During April 1, 2015 - March 31, 2016	Up to 40 ea x \$	\$	\$
3	During April 1, 2016 - March 31, 2017	Up to 40 ea x \$	\$	\$
4	During April 1, 2017 - March 31, 2018	Up to 40 ea x \$	\$	\$
5	During April 1, 2018 - March 31, 2019	Up to 40 ea x \$	\$	\$
6	During April 1, 2019 - March 31, 2020	Up to 40 ea x \$	\$	\$
7	During April 1, 2020 - March 31, 2021	Up to 40 ea x \$	\$	\$
8	During April 1, 2021 - March 31, 2022	Up to 40 ea x \$	\$	\$
9	During April 1, 2022 - March 31, 2023	Up to 40 ea x \$	\$	\$
10	During April 1, 2023 - March 31, 2024	Up to 40 ea x \$	\$	\$

Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

ANNEX "B"

BASIS OF PAYMENT

Category 2: Heated RH Sensors

The firm unit price must be an all inclusive price, in accordance with Annex "A" - Requirement, in Canadian funds including 12 month warranty, Canadian customs duties, excise taxes, transportation included F.O.B. destination. The total amount of Goods and Services Tax (GST) or Harmonized Sales Tax (HST) is not included.

Firm unit price also includes the cost of the required accessories, components, adaptors, temperature sensor probe for a complete and functional sensor model, also included are test documents, calibration certificates and technical manual including all packaging, shipping and freight.

If the heated sensor requires any AC/AC or AC/DC adapters in order to accomodate the additional power requirements in the deliverables, they must be included as part of each sensor unit at no additional charge.

The Contractor must provide technical information and advice, as well as revisions to the technical documents during the contract period at no charge.

Canada reserves the right to advance or delay the delivery of various firm quantities, from time to time, during the contract period.

1.0 Firm Quantities

Contract Year	Delivery Period	Firm Quantities	Firm Unit Price (GST/HST extra)	Extended Price (GST/HST extra)
1	Date of Contract Award - March 31, 2015	2 ea x	\$ _____ =	\$ _____
TOTAL: \$ _____				

Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

2.0 Optional Quantities

Canada may purchase any or all of the optional goods at any time during the period of the contract. The optional quantities may be exercised in various quantities, from time to time, during the contract period.

Canada reserves the right to advance or delay the purchase of various optional quantities between contract years.

If the optional quantities are exercised, the pricing for the optional quantities will be the lesser of either:

- i) the prices detailed below;
- ii) the Contractor's published price list in effect at the time the optional quantities are exercised, less the quantity discount at \_\_\_\_%, or
- iii) price to be negotiated with Canada at the time the optional quantity is exercised.

Contract Year	Delivery Period	Optional Quantities	Firm Unit Price (GST/HST extra)	Extended Price (GST/HST extra)
1	Date of Contract Award - March 31, 2015	up to 30 ea	x \$ _____	\$ _____
2	During April 1, 2015 - March 31, 2016	up to 30 ea	x \$ _____	\$ _____
3	During April 1, 2016 - March 31, 2017	up to 30 ea	x \$ _____	\$ _____
4	During April 1, 2017 - March 31, 2018	up to 30 ea	x \$ _____	\$ _____
5	During April 1, 2018 - March 31, 2019	up to 30 ea	x \$ _____	\$ _____
6	During April 1, 2019 - March 31, 2020	up to 30 ea	x \$ _____	\$ _____
7	During April 1, 2020 - March 31, 2021	up to 30 ea	x \$ _____	\$ _____
8	During April 1, 2021 - March 31, 2022	up to 30 ea	x \$ _____	\$ _____
9	During April 1, 2022 - March 31, 2023	up to 30 ea	x \$ _____	\$ _____
10	During April 1, 2023 - March 31, 2024	up to 30 ea	x \$ _____	\$ _____

## **ANNEX "C"**

### **INSURANCE REQUIREMENTS**

#### **1. Commercial General Liability Insurance**

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
  - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows:

Canada, as represented by Public Works and Government Services Canada.
  - (b) Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
  - (c) Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
  - (d) Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
  - (e) Cross Liability/Separation of Insures: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
  - (f) Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
  - (g) Employees and, if applicable, Volunteers must be included as Additional Insured.
  - (h) Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
  - (i) Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
  - (j) Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
  - (k) If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.

- (l) Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
- (m) Non-Owned Automobile Liability - Coverage for suits against the Contractor resulting from the use of hired or non-owned vehicles.
- q) Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.
- r) Litigation Rights: Pursuant to subsection 5(d) of the Department of Justice Act, S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

For the province of Quebec, send to:  
Director Business Law Directorate,  
Quebec Regional Office (Ottawa),  
Department of Justice,  
284 Wellington Street, Room SAT-6042,  
Ottawa, Ontario, K1A 0H8

For other provinces and territories, send to:  
Senior General Counsel,  
Civil Litigation Section,  
Department of Justice  
234 Wellington Street, East Tower  
Ottawa, Ontario K1A 0H8

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

## ANNEX "D"

### FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with such request by Canada will also render the bid non-responsive or will constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit HRSDC-Labour's website.

Date: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only 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 federally regulated employer being subject to the Employment Equity Act.

☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

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 Agreement to Implement Employment Equity (AIEE) in place with HRSDC-Labour.

OR



Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

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( ) A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to HRSDC-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 HRSDC-Labour.

B. Check only 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 annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions).

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

## ANNEX "E"

### CERTIFICATION

#### Form 1 OEM Certification Form

This confirms that the original equipment manufacturer (OEM) identified below has authorized the Bidder named below to provide and maintain its products under any contract resulting from the bid solicitation identified below.

Name of OEM \_\_\_\_\_

Signature of authorized signatory of OEM \_\_\_\_\_

Print Name of authorized signatory of OEM \_\_\_\_\_

Print Title of authorized signatory of OEM \_\_\_\_\_

Address for authorized signatory of OEM \_\_\_\_\_

Telephone no. for authorized signatory of OEM \_\_\_\_\_

Fax no. for authorized signatory of OEM \_\_\_\_\_

Date signed \_\_\_\_\_

Solicitation Number \_\_\_\_\_

Name of Bidder \_\_\_\_\_

Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

**ANNEX "F"**  
**EVALUATION CRITERIA**

See attached ...

Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

## ANNEX "F"

### EVALUATION CRITERIA

#### PART A - Mandatory Technical Criteria

The bidder must submit evidence for all mandatory criteria in its bid and include technical literature.

CATEGORY 1) Unheated RH Sensors: Bids proposing the unheated RH sensors will be evaluated against the Mandatory Criteria M1 to M8, The sensor meeting the requirements of each of the criteria M1 to M8 will be deemed responsive and be considered for further evaluation against the Point Rated Evaluation Criteria. The unheated sensors failing to meet one or more of the M1 to M8 requirements will be deemed non-responsive and will not be considered further.

CATEGORY 2) Heated RH Sensors: The proposed heated RH sensors will be evaluated against Mandatory Criteria M1 to M7, M9 and M10. The sensor version meeting the requirements of each of the criteria M1 to M7, M9 and M10 will be deemed responsive and be considered for further evaluation against the Point Rated Evaluation Criteria. The heated sensors failing to meet one or more of the M1 to M7, M9 and M10 requirements will be deemed non-responsive and will not be considered further.

Failure to pass the Mandatory Technical Criteria evaluation for the proposed heated RH sensor will not impact the evaluation results of the same RH sensor model in its unheated version.

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

	MANDATORY CRITERIA	Bidder is requested to provide the location of the substantiating information in the Bid.	
		Section #	PAGE #
<b>M1. SENSOR INFORMATION</b> The Bidder must provide the name and model of the proposed relative humidity sensor.			
<b>M2.</b> For each sensor proposed, the bidder must identify if it is heated or unheated.			
<b>M3. TECHNICAL REQUIREMENTS</b> The Bidder's proposed Relative Humidity Sensor(s) must meet all technical specifications as stated in the Technical Requirements identified from 3.1 to 3.16 below.			

MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.	PAGE #
<p><b>3.1 Operating Environment</b></p> <p>For (a) <b>Temperature</b> and (b) <b>Humidity</b>: the Bidder must provide reports, papers, or similar documentation which demonstrates with data and factual information how the proposed sensor meets the stated performance criteria. Acceptable documentation includes but not limited to tests organized by a third party, summary of operational performance in networks or applications of a third party, or any other traceable documentation which presents results relative to the criterion assessed.</p> <p>For (c) <b>Corrosion</b>: the Bidder must provide product certification meeting 60068-2-52 severity 1, or MIL-STD-810G Method 509, which must be current and valid</p>	<p>a) <b>Temperature</b>: The sensor must operate outdoors without performance deterioration within -40°C to +50°C.</p> <p>b) <b>Humidity</b>: The sensor must operate outdoors without performance deterioration within 0% to 100%RH.</p> <p>c) <b>Corrosion</b>: The sensor must operate outdoors without performance deterioration in an environment with salt, mist or fog. <i>The sensor must comply with standards that demonstrate the performance in such environments, 60068-2-52 severity 1, or MIL-STD-810G Method 509, or equivalent.</i></p> <p><b>The term “or equivalent” is defined as:</b></p> <ol style="list-style-type: none"> <li>Certifications that are equivalent in to the certification(s) specified in the bid solicitation will be considered where the Bidder: <ol style="list-style-type: none"> <li>designates the name of the substitute certification;</li> <li>states that the substitute certification is fully interchangeable with the certification specified;</li> <li>provides complete specifications and descriptive literature for the substitute certification;</li> <li>provides compliance statements that include technical specifics showing the substitute certification meets all mandatory performance criteria that are specified in the bid solicitation; and</li> <li>clearly identifies those areas in the specifications and descriptive literature that support the substitute certification compliance with any mandatory performance criteria.</li> </ol> </li> <li>Certifications offered as equivalent will not be considered if: <ol style="list-style-type: none"> <li>the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute certification; or</li> <li>the substitute certification fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</li> </ol> </li> <li>In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute certification to demonstrate, at the sole cost of bidders, that the substitute certification is equivalent to the certification specified in the bid solicitation.</li> </ol>		

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.  
tor015

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.	
		Section #	PAGE #
<b>3.2 Accuracy: uncertainty</b> <i>(defined as 2 standard deviation)</i> The Bidder must provide reports, papers, or similar documentation which demonstrates with data and factual information how the proposed sensor meets the stated performance criterion. Acceptable documentation includes but is not limited to tests organized by a third party, summary of operational performance in networks or applications of a third party, or any other traceable documentation which presents results relative to the criteria assessed.	The measurement uncertainty of sensors must be less than or equal to:  a) 3% RH for $0\% \leq RH \leq 90\%$ ; and b) 4% RH for $90\% < RH \leq 100\%$ .		







Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME
<div> <div>MANDATORY CRITERIA</div> <div> <div>3.5 Measurement Range</div> <div> <p>The Bidder must provide reports, papers, or similar documentation which demonstrates with data and factual information how the proposed sensor meets the stated performance criterion. Acceptable documentation includes but is not limited to tests organized by a third party, summary of operational performance in networks or applications of a third party, or any other traceable documentation which presents results relative to the criteria assessed.</p> </div> </div> </div>		
<div>The sensor must measure and report relative humidity between the range of 0% to 100% RH.</div>		
<div> <div>Bidder is requested to provide the location of the substantiating information in the Bid.</div> <div> <div>Section #</div> <div>PAGE #</div> </div> </div>		

Solicitation No. - N° de l'invitation <b>K3D33-121413/A</b>	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur <b>tor015</b>	<b>MANDATORY CRITERIA</b>	<b>Bidder is requested to provide the location of the substantiating information in the Bid.</b>	<b>Section #</b>	<b>PAGE #</b>
Client Ref. No. - N° de réf. du client <b>K3D33-121413</b>	File No. - N° du dossier <b>TOR-3-36151</b>	CCC No./N° CCC - FMS No./N° VME				
<b>3.6 Output</b> The Bidder must provide reports, papers, or similar documentation which demonstrates with data and factual information how the proposed sensor meets the stated performance criterion. Acceptable documentation includes but is not limited to tests organized by a third party, summary of operational performance in networks or applications of a third party, or any other traceable documentation which presents results relative to the criterion assessed.	The sensor output must be at least one of the following: <ul style="list-style-type: none"><li>- A DC voltage within 0 to 5 VDC, indicating RH; or.</li><li>- A digital interface: SDI-12</li></ul>					

<p>Solicitation No. - N° de l'invitation K3D33-121413/A</p> <p>Client Ref. No. - N° de réf. du client K3D33-121413</p>	<p>Amd. No. - N° de la modif. tor015</p> <p>File No. - N° du dossier TOR-3-36151</p>	<p>Buyer ID - Id de l'acheteur tor015</p> <p>CCC No./N° CCC - FMS No./N° VME</p>	<div>MANDATORY CRITERIA</div> <div> <div>Bidder is requested to provide the location of the substantiating information in the Bid.</div> <div> <div>Section #</div> <div>PAGE #</div> </div> </div>	<div> <div>3.7 Calibration</div> <div> <p>The Bidder must provide related proof of certification meeting ISO/IEC 17025:2005 (or later), which must be current and valid.</p> <p>(a) Each sensor must be calibrated at a facility accredited to <b>ISO/IEC 17025:2005</b> (or later). Calibration Laboratory Assessment Services (CLAS), National Institute of Standards and Technology (NIST) and American Association for Laboratory Accreditation (A2LA) accredited calibration laboratories, or equivalent are acceptable calibration facilities.</p> <p><i>Bidders must provide written proof that the facility used to calibrate the Bidder's sensors is accredited to the ISO/IEC 17025:2005 (or later) standard or equivalent, in the form of a current and valid Accreditation Certificate, must be included within the bid proposal.</i></p> <p>(b) The bid proposal must also provide a description of the calibration methodology to illustrate that the calibration data supplied with each sensor verifies operation of the sensor within the measurement range and accuracy requirements of this solicitation.</p> <p><b>The term "or equivalent" is defined as:</b></p> <ol style="list-style-type: none"> <li>Certifications that are equivalent in to the certification(s) specified in the bid solicitation will be considered where the Bidder: <ul style="list-style-type: none"> <li>designates the name of the substitute certification;</li> <li>states that the substitute certification is fully interchangeable with the certification specified;</li> <li>provides complete specifications and descriptive literature for the substitute certification;</li> <li>provides compliance statements that include technical specifics showing the substitute certification meets all mandatory performance criteria that are specified in the bid solicitation; and</li> <li>clearly identifies those areas in the specifications and descriptive literature that support the substitute certification compliance with any mandatory performance criteria.</li> </ul> </li> <li>Certifications offered as equivalent will not be considered if: <ol style="list-style-type: none"> <li>the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute certification; or</li> <li>the substitute certification fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</li> </ol> </li> <li>In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute certification to demonstrate, at the sole cost of bidders, that the substitute certification is equivalent to the certification specified in the bid solicitation.</li> </ol> </div> </div>
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MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.	PAGE #
Section #			
<p><b>3.8 Dust and Water Tight Integrity</b></p> <p>The bid must include documentation that demonstrates that the RH Sensor complies with Ingress Protection (IP) Rating Code IP65 (Standard 60529) or equivalent standard.</p> <p>If the proposed sensor requires any outdoor enclosure, the Bidder must provide related proof of certification for <b>(a) Ingress of dust</b> and <b>(b) ingress of water</b>, which must be current and valid.</p>	<p>a) The RH sensor must prevent ingress of dust;</p> <p>b) The RH sensor must resist ingress of water</p> <p>c) For each RH sensor proposed, the bidder must specify with a checkmark if the proposed sensor requires any outdoor enclosures to protect onboard electronics.</p> <p>Outdoor enclosure(s) Required: (Yes) _____ (No) _____</p> <p><b>The term “or equivalent” is defined as:</b></p> <ol style="list-style-type: none"> <li>Standards that are equivalent in to the standard(s) specified in the bid solicitation will be considered where the Bidder: <ol style="list-style-type: none"> <li>designates the name of the substitute standard;</li> <li>states that the substitute standard is fully interchangeable with the standard specified;</li> <li>provides complete specifications and descriptive literature for the substitute standard;</li> <li>provides compliance statements that include technical specifics showing the substitute standard meets all mandatory performance criteria that are specified in the bid solicitation; and</li> <li>clearly identifies those areas in the specifications and descriptive literature that support the substitute standard compliance with any mandatory performance criteria.</li> </ol> </li> <li>Standards offered as equivalent will not be considered if: <ol style="list-style-type: none"> <li>the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute standard; or</li> <li>the substitute standard fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</li> </ol> </li> <li>In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute standard to demonstrate, at the sole cost of bidders, that the substitute standard is equivalent to the standard specified in the bid solicitation.</li> </ol>		

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		Section #	PAGE #
<p><b>3.9</b></p> <p><b>Electromagnetic interference (EMI) / Radio Frequency Interference (RFI)</b></p> <p>The Bidder must include documentation that demonstrates that the RH sensor complies with EN 61326-1:2005 or equivalent standard.</p>	<p>The RH sensor must include documentation that demonstrates that the RH Sensor complies with EN 61326-1:2005, or equivalent standard.</p> <p>The term "or equivalent" is defined as: Canada has the sole right to reject any proposed alternative. Bidders are strongly encouraged to inquire with the Contracting Authority about acceptability of equivalency during the bid period.</p> <p><b>The term "or equivalent" is defined as:</b></p> <ol style="list-style-type: none"> <li>Standards that are equivalent in to the standard(s) specified in the bid solicitation will be considered where the Bidder: <ol style="list-style-type: none"> <li>designates the name of the substitute standard;</li> <li>states that the substitute standard is fully interchangeable with the standard specified;</li> <li>provides complete specifications and descriptive literature for the substitute standard;</li> <li>provides compliance statements that include technical specifics showing the substitute standard meets all mandatory performance criteria that are specified in the bid solicitation; and</li> <li>clearly identifies those areas in the specifications and descriptive literature that support the substitute standard compliance with any mandatory performance criteria.</li> </ol> </li> <li>Standards offered as equivalent will not be considered if: <ol style="list-style-type: none"> <li>the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute standard; or</li> <li>the substitute standard fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</li> </ol> </li> <li>In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute standard to demonstrate, at the sole cost of bidders, that the substitute standard is equivalent to the standard specified in the bid solicitation.</li> </ol>		

MANDATORY CRITERIA			Bidder is requested to provide the location of the substantiating information in the Bid.	
			Section #	PAGE #
<b>3.10 Weight of the sensor</b> The bidder must provide documentation that demonstrates that the RH sensor weight is 500 g or less.	The RH sensor must weigh 500 g or less.			
<b>3.11 Dimensions of the probe(s)</b> The bidder must provide documentation that demonstrates that the RH sensor humidity sensor probe length is 300 mm or less and has a diameter of 40 mm or less.	<b>Humidity sensor probe</b> <b>Length: 300 mm or less.</b> <b>Diameter: 40 mm or less.</b>			
<b>3.12 Mean Time Between Failure (MTBF)</b> The Bidder must explain how they determine MTBF for their sensor(s). Failure to provide sufficient explanation may result in the bid being deemed non-responsive.	The RH sensor must operate with a MTBF of 10 years or more.  In this document, "failure" is defined as a termination of the ability of the humidity sensor to perform within specification, resulting from the failure of sensor subassemblies or material. For the purpose of the Mean Time Between Failure (MTBF) definition, the sensor must be maintained according to the Manufacturer's recommendations.			

MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.	
		Section #	PAGE #
<p><b>3.13 Survivability</b></p> <p><b>For (a) Temperature and (b) Thermal Shock:</b> The Bidder must provide reports, papers, or similar documentation which demonstrates with data and factual information how the proposed sensor meets the stated performance criterion. Acceptable documentation includes but is not limited to tests organized by a third party, summary of operational performance in networks or applications of a third party, or any other traceable documentation which presents results relative to the criteria assessed.</p> <p>The Bidder must provide one (1) example demonstrating the sensor's temperature application and thermal shock application.</p> <p><b>For (c) Vibration and (d) Mechanical Shock:</b> The Bidder must provide related proof of certification, which must be current and valid.</p>	<p><b>a) Temperature:</b> The RH sensor must return to normal operation within specifications after 24 hours exposure (while operating) to temperatures outside of the normal operating range of -40°C to +50°C but within the range from -60°C to +60°C, without external intervention</p> <p><b>b) Thermal Shock:</b> (i) The RH sensor must be operational after being exposed to a sudden temperature change from +20°C to -40°C and from +20°C to +50°C. "Sudden" means a change in environment occurring in less than one minute, but lasting at least one hour at the new temperature. (ii) The RH sensor must resume operation after remaining without power for a period of at least one hour at a temperature of -40°C.</p> <p><b>c) Vibration:</b> The RH sensor must comply with one of i) AECTP-400 Edition 3 NATO standard on loose cargo. OR ii) MIL-STD-202G Method 201 or 60068-2-6, or equivalent standard for vibration. Bid proposal must state which standard applies to the sensors submitted and provide proof that the standard submitted is being adhered to.</p> <p><b>d) Mechanical Shock:</b> The RH sensor must comply with at least one of the following standards: AECTP-400 Edition 3 NATO standard on handling, "or equivalent" standard for handling (Acceptable standards include: MIL-STD-202G Method 203C (Random Drop), or 207B (High Impact Shock) or 213B (Shock).</p> <p><b>The term "or equivalent" is defined as:</b></p> <ol style="list-style-type: none"> <li>Standards that are equivalent in to the standard(s) specified in the bid solicitation will be considered where the Bidder: <ol style="list-style-type: none"> <li>designates the name of the substitute standard;</li> <li>states that the substitute standard is fully interchangeable with the standard specified;</li> <li>provides complete specifications and descriptive literature for the substitute standard;</li> <li>provides compliance statements that include technical specifics showing the substitute standard meets all mandatory performance criteria that are specified in the bid solicitation; and</li> <li>clearly identifies those areas in the specifications and descriptive literature that support the substitute standard compliance with any mandatory performance criteria.</li> </ol> </li> <li>Standards offered as equivalent will not be considered if: <ol style="list-style-type: none"> <li>the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute standard; or the substitute standard fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</li> </ol> </li> <li>In conducting its evaluation of the bids, Canada may, but will have no obligation to, request bidders offering a substitute standard to demonstrate, at the sole cost of bidders, that the substitute standard is equivalent to the standard specified in the bid solicitation.</li> </ol>		



Solicitation No. - N° de l'invitation <b>K3D33-121413/A</b>	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.	
		Section #	PAGE #
<b>3.14 Maintenance</b> The Bidder must provide reports, papers, or similar documentation which demonstrates with data and factual information how the proposed sensor meets the stated performance criterion. Acceptable documentation includes but not limited to tests organized by a third party, summary of operational performance in networks or applications of a third party, or any other traceable documentation which presents results relative to the criteria assessed.	The scheduled preventive maintenance interval recommended by the Manufacturer must be 12 months or longer from the date the sensor begins operation		
<b>3.15 Continuous Operation</b> The bidder must provide documentation to demonstrate the sensor operates continuously, unattended, except for scheduled maintenance visits.	All sensors must operate continuously, unattended, except for scheduled maintenance visits.		

Solicitation No. - N° de l'invitation K3D33-121413/A		Amd. No. - N° de la modif.		Buyer ID - Id de l'acheteur tor015	
Client Ref. No. - N° de réf. du client K3D33-121413		File No. - N° du dossier TOR-3-36151		CCC No./N° CCC - FMS No./N° VME	
MANDATORY CRITERIA					
<b>3.16 Additional Accessory Devices</b>  For each RH sensor proposed, the bidder must identify if any additional accessory device (i.e. temperature sensor, signal conditioning or communications processing) is required to enable the sensor to operate within the mandatory specifications identified within all Mandatory Technical Criteria.  The bidder must provide a detailed list of all additional accessory devices indicated as part of the RH sensor model proposed		<b>Bidder is requested to provide the location of the substantiating information in the Bid.</b>			
		<b>Section #</b>		<b>PAGE #</b>	
<b>3.16 Additional Accessory Devices</b>  For each RH sensor proposed, the bidder must identify if any additional accessory device (i.e. temperature sensor, signal conditioning or communications processing) is required to enable the sensor to operate within the mandatory specifications identified within all Mandatory Technical Criteria.  The bidder must provide a detailed list of all additional accessory devices indicated as part of the RH sensor model proposed		All additional accessory devices required for a complete and functional RH sensor must be stated, except in the event that the bidder identifies in their proposal that no additional accessory devices are required.  Accessory Device(s) Required: (Yes) _____ (No) _____  Accessory Device Description: _____ OEM Part No. _____ Accessory Device Description: _____ OEM Part No. _____ Accessory Device Description: _____ OEM Part No. _____  Other: _____ Other: _____			
<b>M4. DOCUMENTATION</b>  4.1 The Bidder must provide the proposed relative humidity sensor's product technical datasheet, and maintenance guide with their bid submission.					

Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif. tor015	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.
Section #	PAGE #	
<p><b>M5. PREVIOUS USAGE (SERVICE HISTORY)</b></p> <p>5.1 The bidder must provide at least one (1) example in which the proposed RH sensor model has been used successfully by a government department or agency or commercial organization for a minimum of 2 years from date of bid closing.</p> <p>The bidder must also provide the name, contact information of the organization stated, and a reference/contact person. Canada reserves the right to contact the reference to verify the information provided.</p> <p>The reference will be contacted for verification purposes. If the reference contact person cannot be reached after three (3) attempts, the bid will be deemed non-responsive.</p>		

MANDATORY CRITERIA		Bidder is requested to provide the location of the substantiating information in the Bid.
Section #	PAGE #	
<b>M6. EVALUATION OF LABORATORY TEST DATA</b>		
6.1	For each proposed version of a RH sensor model, the Bidder must provide the data resulting from the laboratory testing of at least two (2) separate sensor units of that proposed sensor model and version, at the test points given in <b>Table 1 Sensor Data Laboratory Testing Points (below)</b> . If the sensor has more than one mode of operation, the test must be performed with the sensor operating in the mode the Bidder has proposed to supply. If the Bidder requests that more than one configuration, mode, version, or option be evaluated, each option is considered as a different model and requires its own set of Test Data.	
6.1.1	The bid must include documentation that shows that, the tests in M6.1 above were performed in a facility that has valid accreditation to ISO 17025:2005 (or later), to the expanded uncertainty of ±1%RH, or better, for humidity at the 95% level of confidence with a coverage factor of $k = 2$ . Calibration Laboratory Assessment Services (CLAS), National Institute of Standards and Technology (NIST) and American Association for Laboratory Accreditation (A2LLA) accredited calibration laboratories, or equivalent are acceptable calibration facilities.	
6.1.2	The RH sensor laboratory test results must include: (a) At each test point listed in Table 1 Sensor Data Laboratory Testing Points (below) at least 25 individual measurements must be made. The data must include the relative humidity (RH) set points, the air temperature set points, the RH as measured by the humidity sensor under test and the measurement of the reference humidity sensor, and the air temperature measured inside the test chamber. (b) The measurement of the air temperature inside the test chamber must have an uncertainty of 0.1°C, or better, at the 95% level of confidence with a coverage factor of $k = 2$ . (c) The data must also include the ambient temperature, relative humidity and atmospheric pressure of the laboratory environment during the test. The accuracy uncertainty at the 95% level of confidence with a coverage factor of $k = 2$ of all the sensors measuring ambient temperature, humidity and pressure must be included.	
6.2 All sensor test data must be provided in electronic format such as a text file on a compact disk (CD) or DVD, or USB compatible device and identified with the bidder's name and this solicitation number with the bidder's proposal. Inability of Canada to access or read the sensor test data will render the bidder's proposal non-responsive.		
<b>The term "or equivalent" is defined as:</b>		
1. Certifications that are equivalent in to the certification(s) specified in the bid solicitation will be considered where the Bidder: a. designates the name of the substitute certification; b. states that the substitute certification is fully interchangeable with the certification specified; c. provides complete specifications and descriptive literature for the substitute certification; d. provides compliance statements that include technical specifics showing the substitute certification 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 substitute certification compliance with any mandatory performance criteria.		
2. Certifications offered as equivalent 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 substitute certification; or b. the substitute certification 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 a substitute certification to demonstrate, at the sole cost of bidders, that the substitute certification is equivalent to the certification specified in the bid solicitation.		

Solicitation No. - N° de l'invitation K3D33-121413/A	Amd. No. - N° de la modif. tor015	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME

MANDATORY CRITERIA	Bidder is requested to provide the location of the substantiating information in the Bid.	
	Section #	PAGE #
<p><b>M7. EVALUATION OF LABORATORY TEST DATA</b></p> <p>Based on the test data provided by the Bidder in compliance with Mandatory Criterion M6, a Bidder's proposed sensor model will be evaluated by Canada as follows:</p> <p>For each test point with the reference RH measurement greater than 90%RH (as set out in Table 1 below), the percentage of the data for which the absolute difference between the RH measurements of the humidity sensor under test and the reference humidity sensor is less than or equal to <b>4%RH</b> is noted as <i>Percent<sub>&gt;90</sub></i>.</p> <p>For each test point with the reference RH measurement less than or equal to 90%RH (as set out in Table 1, below) the percentage of the data at the test point for which the absolute difference between the RH measurements of the humidity sensor under test and the reference humidity sensor is less than or equal to 3%RH is noted as <i>Percent<sub>&lt;90</sub></i>.</p> <p><b>7.1 Each proposed RH sensor model must meet the following:</b></p> <p><b>7.1.1</b> Each of <i>Percent<sub>&gt;90</sub></i> AND <i>Percent<sub>&lt;90</sub></i> is greater than or equal to <b>95%</b> for all the test points evaluated.</p>		

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

MANDATORY CRITERIA	Bidder is requested to provide the location of the substantiating information in the Bid.	
	Section #	PAGE #
<b>POWER REQUIREMENTS</b> The RH Sensor Power Requirements will be evaluated based on either M8 or M9 depending on whether the sensor proposed is unheated or heated.		
<b>M8 – This criteria applies to Unheated Sensors only</b> The proposed sensor must meet a) and b)  a) The unheated version of a RH sensor model must operate without performance degradation when supplied with a voltage equal to or more than 10 VDC and equal to or less than 15 VDC (power supplied from a standard data logger device); and  b) Total current drawn by the sensor in the unheated version must be less than or equal to 20 mA (in the full operating supplied voltage range).		
<b>M9 – This criteria applies to Heated Sensors only</b> Bidder's proposed Heated RH Sensor model must have the same model number in the unheated version deemed responsive against M1 to M8.  The bidder must identify the same model by referencing the model number or series number of the unheated model proposed.		

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tor015

Client Ref. No. - N° de réf. du client  
K3D33-121413

File No. - N° du dossier  
TOR-3-36151

CCC No./N° CCC - FMS No./N° VME

MANDATORY CRITERIA	Bidder is requested to provide the location of the substantiating information in the Bid.	
	Section #	PAGE #
<b>M10 This criteria applies to Heated Sensors only</b> <b>The proposed sensor must meet a) and b) or c)</b>  a) The Heated version of a RH sensor model must operate without performance degradation when supplied with a voltage equal to or more than 10 VDC and equal to or less than 15 VDC (power supplied from a standard data logger device); and  b) Total current drawn by the sensor in the heated version must be less than or equal to 20 mA (in the full operating supplied voltage range).  OR  c) The Heated version of a RH sensor model must operate without performance degradation when supplied by any AC/AC or AC/DC adapters needed to accommodate the additional power requirements in the deliverables. Such an adapter must operate from 115V AC 60 Hz, and must be electrically isolated from the sensor.		

Solicitation No. - N° de l'invitation  
K3D33-121413/A

Client Ref. No. - N° de réf. du client  
K3D33-121413

Amd. No. - N° de la modif.  
TOR-3-36151

File No. - N° du dossier  
TOR-3-36151

Buyer ID - Id de l'acheteur  
tor015

CCC No./N° CCC - FMS No./N° VME

Table 1 - Sensor Data Laboratory Testing Points

	Temperature (°C)					
	-10	0	10	20	30	
% RH	95	x	x	x	x	
	90		x	x	x	
	80	x	x	x	x	
	70	x	x	x	x	
	60	x	x	x	x	
	50	x	x	x	x	
	40	x	x	x	x	
	30	x	x	x	x	
	20	x	x	x	x	

PART B. POINT RATED EVALUATION CRITERIA

- Each responsive Unheated RH Sensor meeting Mandatory Technical Criteria M1 to M8 and each responsive Heated RH Sensor meeting Mandatory Technical Criteria M1 to M7, M9 and M10 will be further evaluated against the Point Rated Criteria R1, R2, and R3. For each sensor version, a Point Rated Technical (PRT) Score will be calculated using the grid below from the sum of the points awarded in the Point Rated Criteria R1, R2, and R3. There is no minimum overall pass mark. Maximum Points available: 50 points.
- The point-rated criteria assessment of each sensor submission is based on the Test Data provided as specified in section Mandatory Technical Criteria M6.



Solicitation No. - N° de l'invitation  
K3D33-121413/A

Client Ref. No. - N° de réf. du client  
K3D33-121413

Amd. No. - N° de la modif.  
TOR-3-36151

File No. - N° du dossier  
TOR-3-36151

Buyer ID - Id de l'acheteur  
tor015

CCC No./N° CCC - FMS No./N° VME

PART B. POINT RATED CRITERIA		POINTS
Responsive bids will be evaluated against the following point-rated criteria. Maximum points available: 50 points. Sensors proposed for category 1 and category 2 will be evaluated separately.		
<b>R1. ACCURACY</b> More than 95% of the Third Party test data readings should fall within the accuracy limits (difference between the test sensor and reference sensor of ±3% for RH≤90% and ±4% for RH>90%). The bidder will receive points based according to the formula below.  $Score_{AC} = 4 \times (Percent - 95)$		Up to a maximum of 20 points
<b>R2. HUMIDITY DEPENDENCE</b> EC will assess how much RH sensor test data changes over the range of humidity. This will be assessed using the Test Data for the range from 20% RH to 95%RH. To evaluate this, the Test Data is stratified into nine RH divisions according to the nominal and reference RH test points (rows) in Table 1. For each reading, the difference between the RH measurement of the sensor under test and the reference RH is calculated. Next, the median is determined for each sensor and for each division (RH range). This yields nine median values for each sensor. Next, the difference between the maximum and minimum medians is calculated, which gives an indication of the variation in the medians – a value of 0 indicates no dependence on the humidity range (i.e., the sensor offset from the reference RH is always the same), while larger values indicate greater variation across humidity ranges (i.e., the sensor offset is not the same for all RH values). This value will be referred to as $MaxVariation_{RH}$ . A humidity dependence score will be assigned to a sensor under test as follows:  $Score_{HD} = 15 \times \left(1 - \frac{MaxVariation_{RH}}{4}\right)$ if $MaxVariation_{RH}$ is between 0 and 4% RH inclusive, and  $Score_{HD} = 0$ otherwise'		Up to a maximum of 15 points
<b>R3. TEMPERATURE DEPENDENCE</b> EC will assess test data to identify how much the error for a sensor changes over the range of temperatures covered in the Test Data (-10°C to +30°C). In a similar fashion to the Humidity Dependence evaluation, the Test Data is first stratified into five divisions according to the nominal test point temperatures (columns) in table 1. Next, the difference between the RH reading of the sensor under test and reference RH is calculated for each test point, and the median of the differences within each temperature division is determined for each sensor. Next, the difference between the maximum and minimum of the medians is calculated, which gives an indication of the maximum range of variation in the medians. Again, 0 means no dependence on temperature. This value will be referred to as $MaxVariation_{Tp}$ . A temperature dependence score will be assigned to a sensor under test as follows:  $Score_{TD} = 15 \times \left(1 - \frac{MaxVariation_{Tp}}{4}\right)$ if $MaxVariation_{Tp}$ is between 0 and 4% RH inclusive, and  $Score_{TD} = 0$ otherwise.		Up to a maximum of 15 points

Sollicitation No. - N° de l'invitation K3D33-121413/A	And. No. - N° de la modif.	Buyer ID - Id de l'acheteur tor015
Client Ref. No. - N° de réf. du client K3D33-121413	File No. - N° du dossier TOR-3-36151	CCC No./N° CCC - FMS No./N° VME