

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

**Bid Receiving
PWGSC
33 City Centre Drive
Suite 480C
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

| | |
|---|--|
| Title - Sujet Relative Humidity Sensors | |
| Solicitation No. - N° de l'invitation K3D33-121413/B | Date 2015-03-12 |
| Client Reference No. - N° de référence du client K3D33-121413 | |
| GETS Reference No. - N° de référence de SEAG PW-\$TOR-015-6813 | |
| File No. - N° de dossier TOR-3-36151 (015) | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-04-22 | |
| Time Zone Fuseau horaire Eastern Daylight Saving Time EDT | |
| F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/> | |
| Address Enquiries to: - Adresser toutes questions à: Abela, Aaron | Buyer Id - Id de l'acheteur tor015 |
| Telephone No. - N° de téléphone (905) 615-2061 () | FAX No. - N° de FAX (905) 615-2060 |
| Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: 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**

Issuing Office - Bureau de distribution

Public Works and Government Services Canada
Ontario Region
33 City Centre Drive
Suite 480
Mississauga
Ontario
L5B 2N5

| | |
|--|--|
| Delivery Required - Livraison exigée See Herein | Delivery Offered - Livraison proposée |
| Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur | |
| Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur | |
| 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) | |
| Signature | Date |

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See attached ...

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This bid solicitation cancels and supersedes previous bid solicitation number K3D33-121413/A dated April 24, 2014 with a closing date of June 18, 2014.

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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, and any other annexes.

2. Summary

- i) Environment Canada (EC) requires unheated relative humidity (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.

- ii) The contract period will be for a period of ten (10) years from Date of Contract Award to March 31, 2025. EC requires the quantities detailed Table A below:
- iii) Delivery of the firm requirement quantity must be completed in accordance to the table below.

There is also the option to purchase additional quantity Unheated RH Sensors up to the maximum quantity specified per contract year as outlined in Table A below.

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TABLE A - Unheated RH Sensors

Contract Period

| Year | Contract Period | Firm Quantity | Optional Quantity |
|------|---|---------------|-------------------|
| 1 | Date of Contract Award - March 31, 2016 | 70 ea. | up to 70 ea. |
| 2 | April 1, 2016 - March 31, 2017 | 70 ea. | up to 70 ea. |
| 3 | April 1, 2017 - March 31, 2018 | 70 ea. | up to 70 ea. |
| 4 | April 1, 2018 - March 31, 2019 | 0 ea. | up to 100 ea. |
| 5 | April 1, 2019 - March 31, 2020 | 0 ea. | up to 100 ea. |
| 6 | April 1, 2020 - March 31, 2021 | 0 ea. | up to 100 ea. |
| 7 | April 1, 2021 - March 31, 2022 | 0 ea. | up to 100 ea. |
| 8 | April 1, 2022 - March 31, 2023 | 0 ea. | up to 100 ea. |
| 9 | April 1, 2023 - March 31, 2024 | 0 ea. | up to 100 ea. |
| 10 | April 1, 2024 - March 31, 2025 | 0 ea. | up to 100 ea. |

- iv) It is intended to award 1 contract for the Unheated RH sensor requirement as a result of this solicitation.

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

- v) As per the Integrity Provisions under section 01 of Standard Instructions 2003 and 2004, bidders must provide a list of all owners and/or Directors and other associated information as required. Refer to section 4.21 of the Supply Manual for additional information on the Integrity Provisions.
- vi) 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).

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.

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The 2003 (2014-09-25) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsections 04 and 05 of Section 01, Integrity Provisions - Bid of Standard Instructions 2003 incorporated by reference above are deleted in their entirety and replaced with the following:

4. Bidders who are incorporated or who are a sole proprietorship, including those bidding as a joint venture, have already provided a list of names of all individuals who are directors of the Bidder, or the name of the owner, at the time of submitting an arrangement under the Request for Supply Arrangement (RFSA). These bidders must diligently inform Canada in writing of any changes affecting the list of directors during this procurement process as well as during the contract period.
5. Canada may, at any time, request that a bidder provide properly completed and signed Consent Forms ([Consent to a Criminal Record Verification form - PWGSC-TPSGC 229](#)) for any or all individuals mentioned above within a specified time frame. Failure to provide such consent forms and associated information within the time frame provided, or failure to cooperate to the verification process, will result in the bid being declared non-responsive.”

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

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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 (2 hard copies and 3 soft copies on CD)
- Section II: Financial Bid (1 hard copy and 1 soft copy)
- Section III: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft 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.

1.2 Exchange Rate Fluctuation Risk Mitigation

1. The Bidder may request Canada to assume the risks and benefits of exchange rate fluctuations. If the Bidder claims for an exchange rate adjustment, this request must be clearly indicated in the bid at time of bidding. The Bidder must submit form [PWGSC-TPSGC 450](#) , Claim for Exchange Rate Adjustments with its bid, indicating the Foreign Currency Component (FCC) in Canadian dollars for each line item for which an exchange rate adjustment is required.
2. The FCC is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuations. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provision in the contract. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease).
4. At time of bidding, the Bidder must complete columns (1) to (4) on form [PWGSC-TPSGC 450](#) , for each line item where they want to invoke the exchange rate fluctuation provision. Where bids are evaluated in Canadian dollars, the dollar values provided in column (3) should also be in Canadian dollars, so that the adjustment amount is in the same currency as the payment.
5. Alternate rates or calculations proposed by the Bidder will not be accepted for the purposes of this exchange rate fluctuation provision.

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 "F", PART A. Mandatory Technical Criteria.

1.2 Financial Evaluation

1.2.1 Mandatory Financial Criteria

The bidder must complete and submit with its bid, Annex "B" – Basis of Payment, Section 1.0 and Section 2.0 in Canadian funds, applicable Taxes excluded, FOB destination, transportation included, Canadian customs duties and excise taxes included. Pricing must be provided for all firm and optional requirements.

Bids will be evaluated based on the prices detailed in Annex "B" – Basis of Payment.

1.2.2 The price used in the evaluation will be the Total Bid Evaluated Price 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 and the maximum Optional Quantities multiplied by proposed Firm Unit Price of each contract year.

1.2.3 SACC Manual Clause

SACC Manual Clause A0220T (2014-06-26), Evaluation of Price

2. Basis of Selection – Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

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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.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

1. Certifications Required Precedent to Contract Award

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

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) 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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

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The Bidder must provide the Contracting Authority with a completed annex [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

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 Unheated Relative Humidity (RH) 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.

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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>) issued by Public Works and Government Services Canada.

2.1 General Conditions

2030 (2014-09-25), 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, 2025 inclusive.

3.2 Delivery Date

Unheated RH Sensors

3.2.1 For Year 1, 30 sensors must be delivered on or before August 4, 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 1, 40 sensors must be delivered on or before October 5, 2015. 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 2, 70 sensors must be delivered between April 1, 2016 and 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 3, 70 sensors must be delivered between April 1, 2017 and on or before March 31, 2018. If the optional quantities are exercised, the optional quantities must be delivered within _____ calendar days of notification by the Contracting Authority.

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

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

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

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

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

3.2.10 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.

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.

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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: _____

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

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

5.4 Inspection and Acceptance

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

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.

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- (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 (2014-09-25), 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) Annex E, OEM Certification
- (i) 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 (EC) requires unheated RH sensors for use in their automated weather observing stations, and partner networks. The unheated RH sensor measures the water vapour content in the atmosphere and outputs the measured value in RH without heating in any part of the sensor.

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.

2.1 Acronym Summary

RH – Relative Humidity
EC – Environment Canada
IEC – International Electrotechnical Commission
MIL-STD – Military Standard
ISO – International Organization for Standardization
EN – European Standard
EMI – Electromagnetic Interference
RFI – Radio Frequency Interference
NATO – North Atlantic Treaty Organization
WMO – World Meteorological Organization
NEMA – National Electrical Manufacturers Association

3. Technical Requirements

The RH sensor must meet or exceed each of the specifications outlined below.

The relative humidity values in this specification are calculated with respect to liquid water, as stated in the WMO –No.8 Guide to Meteorological Instruments and Methods of Observation, Annex 4.A, for all temperatures above and below 0°C.

The phrase “without any performance deterioration” means that the requirement (Section 3.1, Accuracy (Uncertainty) is satisfied.

The term “RH sensor” refers to the complete RH measuring system, consisting of the sensing element and processing electronics. The part of the RH sensor that contains the sensing element, filter, and some associated electronics is referred to as the “RH sensor probe”, and the part of the RH sensor that contains the main processing electronics as the “electronics housing”. The sensor probe and the housing can be attached together to form one single unit, or can be as two separate units connected by a cable.

The measurement uncertainty is defined as two (2) standard deviations.

3.1 Accuracy (Uncertainty):

- 3.1.1 The measurement uncertainty of the RH sensor must be less than or equal to
 - 3.1.1.1 3% RH for $0\% \leq RH \leq 90\%$, and
 - 3.1.1.2 4% RH for $90\% < RH \leq 100\%$

3.2 Operating Environment:

- 3.2.1 Temperature: the RH sensor must operate and maintain accuracy without any performance deterioration in an outdoor environment within -40°Celsius to +50°Celsius
- 3.2.2 Humidity: the RH sensor must operate and maintain accuracy without any performance deterioration in an outdoor environment with 0% to 100%RH
- 3.2.3 Corrosion: for operating and measuring in an outdoor environment with salt, mist or fog, the RH sensor must comply with one of
 - 3.2.3.1 IEC 60068-2-52 severity 1 or 2, or
 - 3.2.3.2 MIL-STD-810G Method 509, or
 - 3.2.3.3 equivalent standard.

3.3 Power Requirement:

- 3.3.1 The RH sensor must operate and maintain accuracy without any performance deterioration when supplied with any voltage between 10 VDC and 15 VDC
- 3.3.2 The total current drawn by the RH sensor must be less than or equal to 100 mA (between 10 VDC and 15VDC)

3.4 Response Time:

- 3.4.1 The time constant (i.e. 1/e (or 63%) response time) of the RH sensor must be less than, or equal to, 25 seconds at room temperature (+20°C **Celsius** to +26°C **Celsius**) in still air with filter

3.5 Long Term Stability:

- 3.5.1 The annual measurement drift of the RH sensor must be less than, or equal to, 1.5%RH

3.6 Output:

- 3.6.1 The RH sensor output must have at least one of the following:
- 3.6.1.1 a DC voltage within 0 to 5 VDC, indicating RH, or
 - 3.6.1.2 a digital interface: SDI-12, providing an RH value

3.7 Calibration:

- 3.7.1 The RH sensor must be calibrated at a facility accredited to ISO/IEC 17025:2005 (or later)

3.8 Dust and Water Tight Integrity:

- 3.8.1 The RH sensor must comply with one of the following: a) Ingress Protection (IP) rating code IP65 or greater (IEC 60529); or b) NEMA enclosure type 4; or c) equivalent standard

3.9 EMI/RFI:

- 3.9.1 The RH sensor must comply with IEC or EN 61326-1, or equivalent standard

3.10 Weight:

- 3.10.1 (a) If the RH sensor consists of a single unit, the weight of the RH sensor must be 500g or less; OR
(b) If the RH sensor consists of two separate units, the weight of the RH sensor probe must be 500g or less, and the weight of the housing unit must be 500g or less

3.11 Dimensions:

- 3.11.1 The RH sensor probe, in either the single-unit or two-separate-unit configuration, must have a diameter of 25 mm or less; and
- (a) If the RH sensor consists of a single unit, the diameter of the RH sensor must be 40 mm or less, and the length of the RH sensor must be 300 mm or less; OR
 - (b) If the RH sensor consists of two separate units, the RH sensor probe must have a length of 300 mm or less, and the maximum dimensions of the housing unit must be 200 mm (length), 100 mm (width) and 80 mm (height), or less

3.12 Survivability:

3.12.1 Temperature: the RH sensor must return to normal operation within specifications after 12 hours or longer exposure (while operating) to temperatures outside of the normal operating range of -40°C to +50°Celsius but within the range from -60°Celsius to +60°Celsius, without external intervention

3.12.2 Thermal shock:

3.12.2.1 The RH sensor must be operational within specification after being exposed to a sudden temperature change from +20°Celsius to -40°C and from +20°Celsius to +50°Celsius.

3.12.2.2 The RH sensor must function from a cold start from a no-power condition at a temperature of -40°Celsius, without external intervention.
The term "sudden" is defined as meaning a change in environment occurring in less than one minute, but lasting at least one hour at the new temperature.

3.12.3 Vibration: the RH sensor must comply with one of AECTP-400 Edition 3 NATO standard on loose cargo, MIL-STD-202G Method 201, IEC or EN 60068-2-6, or equivalent standard

3.13 Maintenance:

3.13.1 The scheduled preventative maintenance interval recommended by the manufacturer for the RH sensor must be 12 months or longer from the date the sensor begins operation

3.14 Continuous Operation:

3.14.1 The RH sensor must operate continuously, unattended, except for scheduled maintenance visits

4. Deliverables:

1. The RH sensors that meet the technical requirements stated in Section 3 must be delivered to 4905 Dufferin St, Toronto, ON, Canada M3H 5T4
2. All of the RH sensors must be delivered with ISO/IEC 17025:2005 (or later) calibration certificates referencing the individual serial number of each sensor.

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ANNEX "B"

BASIS OF PAYMENT

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, 2016 | 70 ea x | \$ _____ = | \$ _____ |
| 2 | April 1, 2016 - March 31, 2017 | 70 ea x | \$ _____ = | \$ _____ |
| 3 | April 1, 2017 - March 31, 2018 | 70 ea x | \$ _____ = | \$ _____ |

TOTAL: \$ _____

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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 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.

Delivery must be made within ____ (____) weeks upon receipt of Contract Amendment to exercise the option to purchase any amount of the Optional Quantity available.

| Contract Year | Delivery Period | Optional Quantities | Firm Unit Price (GST/HST extra) | Extended Price (GST/HST extra) |
|----------------------|---|----------------------------|--|---------------------------------------|
| 1 | Date of Contract Award - March 31, 2016 | Up to 70 ea x | \$ _____ | \$ _____ |
| 2 | April 1, 2016 - March 31, 2017 | Up to 70 ea x | \$ _____ | \$ _____ |
| 3 | April 1, 2017 - March 31, 2018 | Up to 70 ea x | \$ _____ | \$ _____ |
| 4 | April 1, 2018 - March 31, 2019 | Up to 100 ea x | \$ _____ | \$ _____ |
| 5 | April 1, 2019 - March 31, 2020 | Up to 100 ea x | \$ _____ | \$ _____ |
| 6 | April 1, 2020 - March 31, 2021 | Up to 100 ea x | \$ _____ | \$ _____ |
| 7 | April 1, 2021 - March 31, 2022 | Up to 100 ea x | \$ _____ | \$ _____ |
| 8 | April 1, 2022 - March 31, 2023 | Up to 100 ea x | \$ _____ | \$ _____ |

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| | | | | | | | |
|----|--------------------------------|--------------|---|----|-------|----|-------|
| 9 | April 1, 2023 - March 31, 2024 | Up to 100 ea | x | \$ | _____ | \$ | _____ |
| 10 | April 1, 2024 - March 31, 2025 | Up to 100 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.

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(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 the 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.

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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

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).

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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 _____

ANNEX "F"

EVALUATION CRITERIA

PART A - MANDATORY TECHNICAL CRITERIA

Bidders must demonstrate meeting every mandatory criteria specification stated below by providing proof in their bids. Simply stating that the mandatory technical criteria is met or complied with is not sufficient. Failure to demonstrate meeting any of the mandatory criteria will result in the bid being deemed non-responsive.

| Mandatory Criteria | | Bidder is requested to provide the location of the substantiating information in the Bid | |
|---|---|--|----------------|
| | | Section # | Page # |
| M1. Sensor Information The Bidder must provide the name, model and configuration code of the proposed RH sensor. | | | |
| M2. Technical Requirements The Bidder's proposed RH sensor(s) must meet all the technical specifications as stated in the Technical Requirements identified from 2.1 to 2.14 below. | | | |
| 2.1 Accuracy: uncertainty To demonstrate this criterion, the bidder must state the accuracy of the proposed sensor in one of the following: (a) technical specifications; or (b) published papers; or (c) test reports. The term "uncertainty" is defined as two (2) standard deviations. | The measurement uncertainty of the RH sensor must be less than or equal to a) 3% RH for $0\% \leq RH \leq 90\%$, and b) 4% RH for $90\% < RH \leq 100\%$ | _____ _____ | _____ _____ |
| 2.2.1 Operating Environment – Temperature To demonstrate this criterion, the bidder must provide either one(1) of the following documentation: (a) data; or (b) graphs in a report or published paper. | The RH sensor must operate and maintain accuracy without any performance deterioration in an outdoor environment within -40°Celsius to +50°Celsius | | |
| 2.2.2 Operating Environment – Humidity To demonstrate that the proposed sensor meets requirement 2.2.2 the bidder must provide reports or published papers with data or graphs which show that the proposed sensor operates and measures with 0% to 100%RH inclusive. | The RH sensor must operate and maintain accuracy without any performance deterioration in an outdoor environment with 0% to 100%RH | | |

| | | | |
|--|--|--|--|
| <p>2.2.3 Operating Environment – Corrosion To demonstrate this criterion, the bidder must provide a test report which shows that the proposed sensor complies with one (1) of the stated standards or equivalent.</p> | <p>For operating and measuring in an outdoor environment with salt, mist or fog, the RH sensor must comply with one of</p> <ul style="list-style-type: none"> (a) IEC 60068-2-52 severity 1 or 2, or (b) MIL-STD-810G Method 509, or (c) equivalent standard. <p>The term “or equivalent standard” is defined as:</p> <p>1. Certifications that are equivalent in to the certification(s) specified in the bid solicitation will be considered where the Bidder:</p> <ul style="list-style-type: none"> (a) designates the name of the substitute certification; (b) provides a compliance statement that the substitute certification is fully interchangeable with, or stronger than, the certification specified; and (c) provides specifications and literature for the substitute certification <p>1. Certifications offered as equivalent will not be considered if:</p> <ul style="list-style-type: none"> (a) the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute certification; (b) the substitute certification fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item. <p>Bidders are STRONGLY encouraged to inquire acceptability of equivalency during the bid period.</p> | | |
| <p>2.3.1 Power Requirement – Voltage To demonstrate this criterion, the bidder must provide either one (1) of the following:</p> <ul style="list-style-type: none"> (a) technical specifications, (b) published papers; or (c) test reports | <p>The RH sensor must operate and maintain accuracy without any performance deterioration when supplied with any voltage between 10 VDC and 15VDC</p> | | |
| <p>2.3.2 Power Requirement – Current To demonstrate this criterion, the bidder must provide any one (1) of the following documentation:</p> <ul style="list-style-type: none"> (a) technical specifications, or (b) published papers; or (c) test reports <p>of the proposed sensor.</p> | <p>The total current drawn by the RH sensor must be less than or equal to 100 mA (between 10 VDC and 15VDC)</p> | | |
| <p>2.4 Response Time To demonstrate this criterion, the bidder must provide either one (1) of the following documentation:</p> <ul style="list-style-type: none"> (a) reports; or (b) published papers with data or graphs to show | <p>The time constant (i.e. 1/e (or 63%) response time) of the RH sensor must be less than, or equal to, 25 seconds at room temperature (+20°C to +26°C) in still air with filter</p> | | |

| | | | |
|--|---|---------------------------|---------------------------|
| <p>compliance for the proposed sensor responding a rapid change of water vapour with the magnitude of the resultant RH change no less than 50%RH.</p> | | | |
| <p>2.5 Long Term Stability To demonstrate this criterion, the bidder must provide either one (1) of the following documentation:</p> <p>(a) reports; or (b) published papers with data or graphs.</p> | <p>The annual measurement drift of the RH sensor must be less than, or equal to, 1.5%RH</p> | | |
| <p>2.6 Output To demonstrate this criterion, the bidder must provide any one (1) of the following documentation:</p> <p>(a) technical specifications; or (b) test reports</p> | <p>The RH sensor output must have at least one of the following:</p> <p>a) a DC voltage within 0 to 5 VDC, indicating RH, or b) a digital interface: SDI-12, providing an RH value</p> | <p>_____</p> <p>_____</p> | <p>_____</p> <p>_____</p> |
| <p>2.7 Calibration To demonstrate this criterion, the bidder must provide a current and valid copy of the Accreditation Certificate</p> | <p>The RH sensor must be calibrated at a facility accredited to ISO/IEC 17025:2005 (or later)</p> | | |
| <p>2.8 Dust and Water Tight Integrity To demonstrate this criterion, the bidder must supply a test report which shows that the proposed sensor complies with one of the stated standards.</p> | <p>The RH sensor must comply with one of the following:</p> <p>(a) Ingress Protection (IP) rating code IP65 or greater (IEC 60529), or (b) NEMA enclosure type 4, or (c) equivalent standard</p> <p>The term “or equivalent standard” is defined as:</p> <p>1. Certifications that are equivalent in to the certification(s) specified in the bid solicitation will be considered where the Bidder:</p> <p>(a) designates the name of the substitute certification; (b) provides a compliance statement that the substitute certification is fully interchangeable with, or stronger than, the certification specified; and (c) provides specifications and literature for the substitute certification</p> <p>2. Certifications offered as equivalent will not be considered if:</p> <p>(a) the bid fails to provide all the information requested to allow the Contracting Authority to fully evaluate the equivalency of each substitute certification; (b) the substitute certification fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</p> <p>Bidders are STRONGLY encouraged to inquire acceptability of equivalency during the bid period.</p> | | |
| <p>2.9 EMI/RFI To demonstrate this criterion, the bidder must provide any one (1) of the following documentation:</p> | <p>The RH sensor must comply with IEC or EN 61326-1, or equivalent standard</p> <p>The term “or equivalent standard” is defined as:</p> | | |

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| <p>(a) technical specifications of the proposed sensor; or (b) test reports, that show the proposed sensor complies with this requirement.</p> | <p>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) provides a compliance statement that the substitute certification is fully interchangeable with, or stronger than, the certification specified; and (c) provides specifications and literature for the substitute certification</p> <p>3. 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; (b) the substitute certification fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item.</p> <p>Bidders are STRONGLY encouraged to inquire acceptability of equivalency during the bid period.</p> | | |
| <p>2.10.1 Weight – Single unit For either (a) or (b), as applicable and in order to demonstrate this criterion, the bidder must provide any one (1) of the following documentation:</p> <p>(a) technical specifications, or (b) operation manuals; or (c) test reports of the proposed sensor.</p> | <p>(a) If the RH sensor consists of a single unit, the weight of the RH sensor must be 500g or less</p> <p>OR</p> <p>(b) If the RH sensor consists of two separate units, the weight of the RH sensor probe must be 500g or less, and the weight of the housing unit must be 500g or less</p> | | |
| <p>2.11.1 Dimensions To demonstrate this criterion, the bidder must provide any one (1) of the following documentation:</p> <p>(a) technical specifications; or (b) operation manuals; or (c) test reports</p> | <p>The RH sensor probe, in either the single-unit or two-separate-unit configuration, must have a diameter of 25 mm or less</p> | | |
| <p>2.11.2 Dimensions For either (a) or (b), as applicable and in order to demonstrate this criterion, the bidder must provide any one (1) of the following documentation:</p> <p>(a) technical specifications; or (b) operation manuals; or (c) test reports of the proposed sensor that show the proposed sensor complies with this requirement.</p> | <p>(a) If the RH sensor consists of a single unit, the diameter of the RH sensor must be 40 mm or less, and the length of the RH sensor must be 300 mm or less</p> <p>OR</p> <p>(b) If the RH sensor consists of two separate units, the RH sensor probe must have a length of 300 mm or less, and the maximum dimensions of the housing unit must be 200 mm (length), 100 mm (width) and 80 mm (height), or less</p> | | |
| <p>2.12.1 Survivability - Temperature To demonstrate this criterion, the bidder must provide either one (1) of the following</p> | <p>The RH sensor must return to normal operation within specifications after 12 hours or longer exposure (while operating) to temperatures outside of the normal operating range of -40°Celsius to +50°Celsius but within the range from -60°Celsius to +60°Celsius, without external</p> | | |

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| documentation: (a) reports; or (b) published papers with data or graphs | intervention | | |
| 2.12.2 (a) Survivability – Thermal Shock To demonstrate this criterion, the bidder must provide any one (1) of the following documentation: (a) reports; or (b) published papers with data or graphs | The RH sensor must be operational within specification after being exposed to a sudden temperature change from +20°Celsius to -40°Celsius and from +20°Celsius to +50°Celsius. The term “sudden” is defined as meaning a change in environment occurring in less than one minute, but lasting at least one hour at the new temperature. | | |
| 2.12.2 (b) Survivability – Thermal Shock To demonstrate this criterion, the bidder must provide either one (1) of the following documentation: (a) reports; or (b) published papers with data or graphs or submit a compliance statement that confirms that the proposed sensor complies with this requirement. | The RH sensor must be able to do a cold start from a no-power condition at a temperature of -40°C, without external intervention. | | |
| 2.12.3 Survivability – Vibration To demonstrate this criterion, the bidder must provide test reports which show that the proposed sensor complies with one of the stated standards or equivalent. | The RH sensor must comply with one of AECTP-400 Edition 3 NATO standard on loose cargo, MIL-STD-202G Method 201, IEC or EN 60068-2-6, or equivalent standard The term “or equivalent standard” is defined as: 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) provides a compliance statement that the substitute certification is fully interchangeable with, or stronger than, the certification specified; and (c) provides specifications and literature for the substitute certification 4. 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; (b) the substitute certification fails to meet or exceed the mandatory performance criteria specified in the bid solicitation for that item. Bidders are STRONGLY encouraged to inquire acceptability of equivalency during the bid period. | | |
| 2.13 Maintenance To demonstrate this criterion, the bidder must submit a compliance | The scheduled preventative maintenance interval recommended by the manufacturer for the RH sensor must be 12 months or longer from the date the sensor begins | | |

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| statement that confirms that the proposed sensor complies with this maintenance requirement. | operation | | |
| 2.14 Continuous Operation To demonstrate this criterion the bidder must submit a compliance statement that confirms s the proposed sensor complies with this maintenance requirement. | The RH sensor must operate continuously, unattended, except for scheduled maintenance visits | | |
| M3 Documentation The bidder must provide the proposed RH sensor's a) product technical specification, and b) operation manuals with the bid submission. | | _____ | _____ |
| M4 Evaluation of Laboratory Test Data | | | |
| 4.1 Operation Mode To demonstrate this criterion, the bidder must submit a compliance statement to confirm that the test data supplied comes from (a) the same mode of operation, (b) configuration and (c) version for the sensor that the bidder has proposed to supply | | | |
| 4.2 Facility Accreditation To demonstrate the bidder must provide a current and valid copy of the Accreditation Certificate for each of (a) and (b). | a) the reference RH Sensor in the test chamber must have current and valid accreditation to ISO 17025:2005 (or later) to the expanded uncertainty of $\pm 1\%$ RH, or better, for humidity at the 95% level of confidence with a coverage factor of 2; and b) the air temperature measurement in the test chamber must have current and valid accreditation to ISO 17025:2005 (or later) to the expanded uncertainty of $\pm 0.1^\circ\text{C}$, or better, for temperature at the 95% level of confidence with a coverage factor of 2. | _____ | _____ |
| 4.3 Data Requirement | | | |
| 4.3.1 Test Data At each test point specified in Figure 1 (see below) five (5) individual measurements must be made with a minimum separation in time of one minute, or longer. | | | |
| 4.3.2 Test Data For each of the five (5) individual measurements referenced in 4.3.1 above, the bidder must provide the laboratory test data that includes each of the following information specifications: a) the relative humidity (RH) set points, b) the air temperature set points, c) the RH as measured by the RH sensor under test, d) the RH as measured by the reference humidity sensor, and e) the air temperature measured inside the test chamber | | _____ | _____ |
| 4.3.3 Ambient Data For each of the five (5) individual measurements referenced in 4.3.1 above, the bidder must provide each of the following information: a) the ambient temperature, b) the ambient RH, and c) Atmosphere pressure of the laboratory environment during the test. | | _____ | _____ |
| 4.4 Data Medium | | | |

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| <p>The bidder must provide the sensor test data (in raw data form, not just graphs) as follows:</p> <ul style="list-style-type: none"> a) in electronic format such as a text file on a compact disk (CD) or DVD, or USB compatible device; and b) identified with the bidder's name and this solicitation number with the bidder's proposal. <p>Inability of Canada to access or read the sensor test data will render the bidder's proposal non-responsive.</p> | <p>_____</p> <p>_____</p> | <p>_____</p> <p>_____</p> |
| <p>4.5 Test Points</p> <p>The regions for the test points specified in 4.5 (a), 4.5 (b) and 4.5 (c) are shown graphically in Figure 1 below</p> <p>The bidder must provide the test data as described in 4.3.1, 4.3.2, and 4.3.3 above resulting from the laboratory testing of at least two (2) separate sensor units proposed sensor model and version, at each of the following test points:</p> <p>(a) at a single, constant temperature in the range from -40° Celsius to -5° Celsius inclusive, 8 different RH test points in the range from 15%RH to 90%RH inclusive covering the RH range as much as possible but with a least 4 test points above 40%RH and at least 5%RH separation between adjacent test points</p> <p>(b) at each of three different, constant temperatures in the range from -2°Celsius to +25°Celsius inclusive that cover the temperature range as much as possible but with a minimum separation of 5°Celsius, 8 different RH test points in the range from 15%RH to 90%RH inclusive covering the RH range as much as possible but with a least 4 test points above 55%RH and 1 RH point in the range from 90%RH to 95%RH including 95%RH but not 90%RH , and a minimum 5%RH separation between adjacent test points</p> <p>(c) at a single, constant temperature in the range from +25°C to +50°C including +50°C but not +25°C, 8 different RH test points in the range from 15%RH to 90%RH inclusive covering the RH range as much as possible but with a least 4 test points above 55%RH and 1 RH point in the range from 90%RH to 95%RH including 95%RH but not 90%RH, and at least 5%RH separation between adjacent test points</p> | | |
| <p>M5 Evaluation of Laboratory Data</p> <p>The Bidder's proposed sensor model will be evaluated by Canada using the laboratory test data from M4, Item 4.5 – Test Points as follows:</p> <p>For each test point with the reference RH measurement greater than 90%RH), 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 4%RH is noted as Percent_{>90} .</p> <p>For each test point with the reference RH measurement less than or equal to 90%RH (as specified above) 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 Percent_{<90}</p> | | |
| <p>5.1 Pass Criteria</p> <p>Each proposed RH sensor model must meet the following:</p> <ul style="list-style-type: none"> a) Percent_{>90} is greater than or equal to 95% for all the test points greater than 90% b) Percent_{<90} is greater than or equal to 95% for all the test points less than or equal to 90% | <p>_____</p> <p>_____</p> | <p>_____</p> <p>_____</p> |

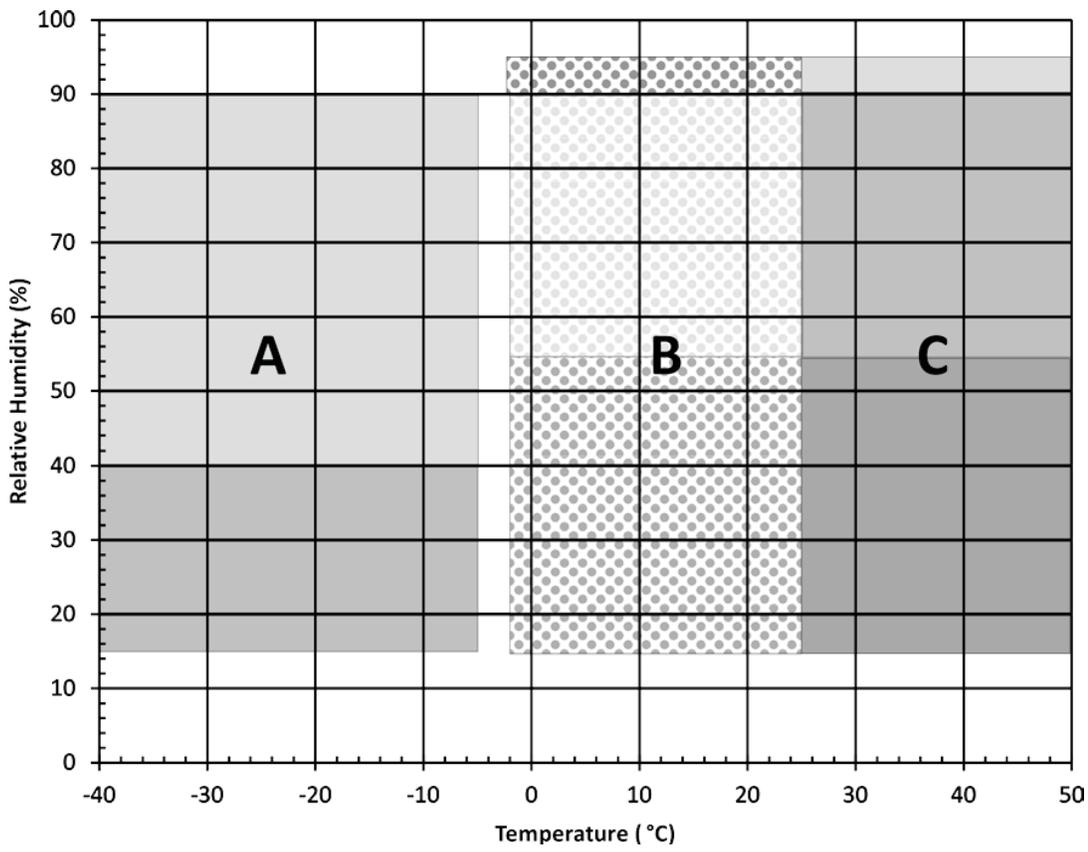


Figure 1: The regions for the test points as specified in 4.5 (a), 4.5 (b) and 4.5 (c) above.