



<p>RETURN BIDS TO: RETOURNER LES SOUMISSIONS À:</p> <p>shawn.davis@canada.ca</p> <p>BID SOLICITATION DEMANDE DE SOUMISSIONS</p> <p>PROPOSAL TO: ENVIRONMENT CANADA</p> <p>We offer to perform or provide to Canada the services detailed in the document including any attachments and annexes, in accordance with the terms and conditions set out or referred to in the document, at the price(s) provided.</p> <p>SOUMISSION À: ENVIRONNEMENT CANADA</p> <p>Nous offrons d'effectuer ou de fournir au Canada, aux conditions énoncées ou incluses par référence dans le document incluant toutes pièces jointes et annexes, les services détaillés dans le document, au(x) prix indiqué(s).</p>	<p>Title – Titre Updating CWEEDS Weather Files</p>	
	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 5000018331</p>	
	<p>Date of Bid solicitation (YYYY-MM-DD) – Date de la demande de soumissions (AAAA-MM-JJ) February 2, 2016</p>	
	<p>Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ)</p> <p>at – à 3:00 P.M. on – le February 17, 2016</p>	<p>Time Zone – Fuseau horaire EST</p>
	<p>F.O.B – F.A.B</p>	
	<p>Address Enquiries to - Adresser toutes questions à Shawn Davis shawn.davis@canada.ca</p>	
	<p>Telephone No. – N° de téléphone 819-938-3814</p>	<p>Fax No. – N° de Fax</p>
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA-MM-JJ)</p>	
	<p>Destination - of Services / Destination des services 4905 Dufferin Street, Downsview, Ontario M3H 5T4</p>	
	<p>Security / Sécurité There is no security requirement associated with this requirement.</p>	
<p>Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l'entrepreneur</p>		
<p>Telephone No. – N° de téléphone</p>	<p>Fax No. – N° de Fax</p>	
<p>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)</p>		
<p>Signature</p>	<p>Date</p>	

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PART 1 – GENERAL INFORMATION

1. Security Requirement

1.1 There is no security requirement associated with this requirement.

2. Statement of Work

The Work to be performed is detailed under Article A, Statement of Work of the resulting contract.

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 PWGSC [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.

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 (2015-07-03) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

The standard instructions 2003 are modified as follows:

Under “Text” at 02:

Delete: “Procurement Business Number”

Insert: “Deleted”

At Section 02 Procurement Business Number

Delete: In its entirety

Insert: “Deleted”

At Section 05 Submission of Bids, Subsection 05 (2d):

Delete: In its entirety

Insert: “send its bid only to Environment Canada (EC) as specified on page 1 of the bid solicitation or to the address specified in the bid solicitation;”

At Section 06 Late Bids:

Delete: “PWGSC”

Insert: "Environment Canada"

At Section 07 Delayed Bids:

Delete: "PWGSC"

Insert: "Environment Canada"

At Section 08 Transmission by Facsimile, Subsection 08 (1):

Delete: In its entirety

Insert: "Bids may be submitted by facsimile if specified in the bid solicitation."

At Section 12 Rejection of Bid, Subsection 12 (1) a. and b.:

Delete: In their entirety

Insert: "Deleted"

At Section 17 Joint Venture, Subsection 17 (1) b.:

Delete: "the Procurement Business Number of each member of the joint venture,"

Insert: "Deleted"

At Section 20 Further Information, Subsection 20 (2):

Delete: In its entirety

Insert: "Deleted"

At Section 05 Submission of Bids, Subsection 05 (4)

Delete: "sixty (60) days"

Insert: "one hundred and twenty (120) days"

2. Submission of Bids

2.1 Bids must be sent directly to the Contracting Authority.

Bids must be sent to the following address, by the time and date indicated below:

mitchel.easey@canada.ca

at – à 2:00 P.M.

on – le January 18, 2015

3. Former Public Servant – Competitive Bid

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

Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c.C-17, the *Defence Services Pension Continuation Act*, 1970, c.D-3, the *Royal Canadian Mounted Police Pension Continuation Act*, 1970, c.R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c.R-11, the *Members of Parliament Retiring Allowances Act*, R.S., 1985, c.M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c.C-8.

Former Public Servant in Receipt of a Pension

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

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

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** () **No** ()

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

4. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 5 days calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

5. Applicable Laws

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

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

6. Basis for Canada's Ownership of Intellectual Property

Environment Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, on the following grounds:

(6.4.1) the main purpose of the contract, or of the deliverables contracted for, is to generate knowledge and information for public dissemination;

PART 3 – BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Canada requests that bidders provide their bid in separate attachments sections as follows:

Section I: Technical Bid (electronic copy)

Section II: Financial Bid (electronic copy)

Section III: Certifications (electronic 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; and
- (3) print on both sides of the paper.

2. Proposals should be concise and should address, but not necessarily be limited to, the Statement of Work and Evaluation Criteria. It is suggested that these criteria be addressed in sufficient depth in the proposals. Simply repeating the statements contained in the Statement of Work is not sufficient; the proposals must explain and demonstrate the bidder's knowledge on issues relevant to the study, that the work requirements have been understood, how they will be carried out and any proposed changes. The proposal must include a detailed schedule with a breakdown showing time allocated for specific tasks as well as the resources assigned to each task.

To be awarded points, a project description must contain at a minimum the following information:

- Project title, client name and industry sector;
- Planned and actual dollar values;

- Planned start and finish dates;
- Nature of services provided for the project or study, methodologies and approaches employed;
- Project team members involved and their roles;
- Summary of the project; and
- Name of contact who may be contacted as a reference.

The proposal should describe in sufficient detail the technical qualifications and relevant experience of the contractor and key professional staff and sources of reference data/information.

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 carry out the Work

Section II: Financial Bid

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

1.1 Price Breakdown

In their financial bid, the bidders are requested to provide a detailed breakdown of the price for the following elements for *each task* of the Work, as applicable:

- (a) Professional fees: For each individual and (or) labour category to be assigned to the Work, the bidders should indicate: i) the firm hourly rate or the firm daily rate, inclusive of overhead and profit; and ii) the estimated number of hours or days, as applicable. The bidders should indicate the number of hours in one working day.
- (g) Applicable Taxes: The bidders should indicate the Applicable Taxes separately.

- 1.2 Bidders should include the following information in their financial bid:

- (a) Their legal name; and
- (b) The name of the contact person (including this person's mailing address, phone and facsimile numbers and email address) authorized by the Bidder to enter into communications with Canada with regards to their bid; and any contract that may result from their bid.

Section III - Certifications

1. **Certifications Required Precedent to Contract Award**

Bidders must provide the required certifications Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.

1.1 Technical Evaluation

Except where expressly provided otherwise, the experience described in the bid must be the experience of the Bidder itself (which includes the experience of any companies that formed the Bidder by way of a merger but does not include any experience acquired through a purchase of assets or an assignment of contract). The experience of the Bidder's affiliates (i.e. parent, subsidiary or sister corporations), subcontractors, or suppliers will not be considered.

The proposals submitted will be evaluated in accordance with the following criteria: personnel and expertise, understanding, strategy and methodology, quality of the proposal and best value for the Crown.

If no acceptable bids are received, Environment Canada reserves the right to not award this contract.

1.2 Technical Evaluation

1.2.1 Mandatory Technical Criteria

The Mandatory Criteria listed below will be evaluated on a simple pass/fail basis. Proposals which fail to meet the mandatory criteria will be deemed non-responsive.

Bidders are advised to address each criterion in sufficient depth to permit a complete requisite analysis and assessment by the evaluation team. Proposals failing to adequately respond to the mandatory criteria may be excluded from further considerations. The technical proposal should address each of the criteria in the order in which they appear.

Bidders are advised that only listing experience without providing any supporting data to describe responsibilities, duties and relevance to the criteria will not be considered demonstrated for the purpose of this evaluation.

The Bidder should provide complete details as to where, when (month and year) and how (through which activities/ responsibilities) the stated qualifications/experience were obtained. Experience gained during formal education shall not be considered work experience. All criteria for work experience shall be obtained in a legitimate work environment as opposed to an educational setting. Co-op terms are considered work experience provided they are related to the required services.

Bidders are also advised that the month(s) of experience listed for a project whose time frame overlaps that of another referenced project will only be counted once. For example: project one time frame is July 2001 to December 2001; project two time frame is October 2001 to January 2002; the total months of experience for these two project references is seven (7) months.

Item	Mandatory Requirement	Compliant (Yes/No)	Reference to Bidder's Proposal (PROPOSAL PAGE #)
M1	<p>The Bidder MUST have a minimum of five (5) years of experience working with solar radiation data.</p> <p>The Bidder MUST provide detailed references (indicating the date) and copy of a verifiable report dated 2010 or older (peer reviewed published paper(s), conference publication(s) presented at international/national solar energy conference(s) or other relevant conference(s), technical report(s)). Other credible report(s) can be submitted.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M2	<p>The Bidder MUST have produced a published peer-reviewed paper concerning analysis of solar radiation data within the last five (5) years.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M3	<p>The Bidder MUST have five (5) years of experience generating/developing CWEEs, CWEC, TMY, TDY, or comparable datasets.</p> <p>The Bidder MUST provide detailed references and copies of verifiable report(s) (peer reviewed published paper(s), conference publication(s) presented at international/national solar energy conference(s) or other relevant conference(s), technical report(s)). Other credible report(s) can be submitted.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M4	<p>The Bidder MUST have five (5) years of experience working with, and summarizing, historical weather data for building energy and solar engineering applications. This must include knowledge of quality control and the handling of missing data.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

1.2.2 Point Rated Technical Criteria

The criteria contained herein will be used to evaluate each proposal that has met all of the mandatory criteria. Bidders are advised to address these criteria in the following order and in sufficient depth in their proposals to enable a thorough assessment. The assessment will be based solely on the information contained within the proposal. Environment Canada may confirm information or seek clarification from bidders.

Only those proposals which are responsive (compliant) with all of the mandatory criteria will be evaluated under the Point Rated Technical Criteria.

Item	Requirement	Maximum Points	Illustrated Compliance, provided by Proposal Page #
R1	<p>The Bidder has a minimum five (5) years of experience working with gridded meteorological datasets (for example, NARR).</p> <p>Five (5) points for five years of experience. One (1) additional point for each year from 6 through 10. (Maximum 10 points)</p>	10	
R2	<p>The Bidder has produced reports concerning the analysis of solar radiation data older than five (5) years.</p> <p>The Bidder has provided detailed references and copy of verifiable report(s) (peer reviewed published paper(s), conference publication(s) presented at international/national solar energy conference(s) or other relevant conference(s), technical report(s)). Other credible independent non-authored by the Bidder publication(s) may have been submitted.</p> <p>One (1) additional point for each year from 6 through 10. (Maximum 5 points)</p>	5	
R3	<p>The Bidder has produced reports concerning the analysis of historical climate data older than five (5) years.</p> <p>The Bidder has provided detailed references and copy of verifiable report(s) (peer reviewed published paper(s), conference publication(s) presented at international/national solar energy conference(s) or other relevant conference(s), technical report(s)). Other credible independent non-authored by the Bidder publication(s) may have been submitted.</p> <p>One (2) additional point for each year from 6 through 10. (Maximum 10 points)</p>	10	
TOTAL POINTS AVAILABLE		25	

1.3 Financial Evaluation

1.3.1 Mandatory Financial Criteria

A maximum of \$35,000.00 (excluding GST/HST) will be paid for the completion of the project. Proposals exceeding this amount will be considered noncompliant and given no further consideration. Total value of contract is not to exceed \$35,000 (excluding GST/HST).

2. Basis of Selection

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

The Contractor selection will be based on the highest combined rating of technical merit (proposal, qualifications and experience) and price proposal. The evaluation will be based on the highest responsive combined rating of technical merit and price. The ratio will be 70% for the technical merit and 30% for the price. 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 points available multiplied by the ratio of 70%.

To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30%. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

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 4 illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 70/30 ratio of technical merit and price, respectively. The total available points equal 86 and the lowest evaluated price is \$41,000.

Table 4. Basis of Selection - Highest Combined Rating Technical Merit (70%) and Price (30%)

	Bidder		
	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	80/86	72/86	70/86
Bid Evaluated Price	\$48,000.00	\$45,000.00	\$41,000.00
Calculations			
Technical Merit Score	$80/86 \times 70 = 65.12$	$72/86 \times 70 = 58.60$	$70/86 \times 70 = 56.98$
Pricing Score	$41/48 \times 30 = 25.63$	$41/45 \times 30 = 27.33$	$41/41 \times 30 = 30.00$
Combined Rating	90.75	85.93	86.98
Overall Rating	1st	3rd	2nd

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated information 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 in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

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

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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list at the time of contract award.

2. Additional 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 provided will render the bid non-responsive.

2.1 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the

substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

PART 6 - RESULTING CONTRACT

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

Title: Collection, evaluation and characterization of biogeochemical background concentration data to inform metals assessments

1. Security Requirement

1.1 There is no security requirement applicable to this Contract.

2. Statement of Work

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

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the PWGSC *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.

3.1 General Conditions

2010B (2015-09-03), General Conditions - Professional Services (Medium Complexity), as modified below, apply to and form part of the Contract.

General conditions 2010B is modified as follows:

At Section 12 Transportation Costs

Delete: In its entirety

Insert: "Deleted"

At Section 13 Transportation Carriers' Liability

Delete: In its entirety.

Insert: "Deleted"

At Section 18, Confidentiality:

Delete: In its entirety

Insert: "Deleted"

Insert Subsection: "35 Liability"

"The Contractor is liable for any damage caused by the Contractor, its employees, subcontractors, or agents to Canada or any third party. Canada is liable for any damage caused by Canada, its employees or agents to the Contractor or any third party. The Parties agree that no limitation of liability or indemnity provision applies to the Contract unless it is

specifically incorporated in full text in the Articles of Agreement. Damage includes any injury to persons (including injury resulting in death) or loss of or damage to property (including real property) caused as a result of or during the performance of the Contract.”

A. For professional services requirements where the deliverables are copyrightable works:

At Section 19 Copyright

Delete: In its entirety

Insert:

1. In this section:
"Material" means anything that is created or developed by the Contractor as part of the Work under the Contract, and in which copyright subsists.
"Background Information" means all Intellectual Property that is not Foreground Information that is incorporated into the Work or necessary for the performance of the Work and that is proprietary to or the confidential information of the Contractor, its subcontractors or any other third party;
"Foreground Information" means all Intellectual Property first conceived, developed, produced or reduced to practice as part of the Work under the Contract;
2. Material that is created or developed by the Contractor as part of the Work under the Contract belongs to Canada. The Contractor must incorporate the copyright symbol and either of the following notices, as appropriate: © Her Majesty the Queen in right of Canada (year) or © Sa Majesté la Reine du chef du Canada (année).
3. At the request of the Contracting Authority, the Contractor must provide to Canada, at the completion of the Work or at such other time as the Contracting Authority may require, a written permanent waiver of moral rights as defined in the [Copyright Act](#), R.S., 1985, c. C-42, in a form acceptable to the Contracting Authority, from every author that contributed to the Work. If the Contractor is an author, the Contractor permanently waives the Contractor's moral rights.
4. All Intellectual Property Rights in the Material belongs to Canada as soon as they come into existence. The Contractor has no right in or to any such Intellectual Property except any right that may be granted in writing by Canada.
5. The Contractor also grants to Canada a non-exclusive, perpetual, irrevocable, worldwide, fully-paid and royalty-free license to use the Background Information to the extent that this information is required by Canada to exercise its rights to use the Material. This license cannot be restricted in any way by the Contractor providing any form of notice to the contrary, including the wording on any shrink-wrapped license attached to any deliverable.

B. For standard service requirements (ex.: manual services, snow or garbage removal, cleaning, window washing, maintenance, etc.) the general conditions 2010 B General Conditions [Professional Services \(Medium Complexity\)](#), must be modified as follows:

At Section 06 Subcontracts

Delete: paragraphs 1, 2, and 3 in their entirety.

Insert: "The Contractor may subcontract the supply of goods or services that are customarily subcontracted by the Contractor. Subcontracting does not relieve the Contractor from any of its obligations under the Contract or impose any liability upon Canada to a subcontractor. In any subcontract, the Contractor agrees to bind the subcontractor by the same conditions by which the Contractor is bound under the Contract, unless the Contracting Authority agrees otherwise, with the exception of requirements under the Federal Contractors Program for employment equity which only apply to the Contractor."

At Section 19 Copyright

Delete: In its entirety

Insert: "Deleted"

4. Term of Contract

4.1 Period of the Contract

The period of the Contract is from date of Contract to March 31, 2016 inclusive.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Shawn Davis
Title: Regional Manager
Environment Canada
Procurement and Contracting
Address: 200 Sacre Coeur

Telephone: 819-938-3814
E-mail address: shawn.davis@canada.ca

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

5.2 Technical Authority *(To be disclosed upon contract award)*

The Technical Authority for the Contract is:

Name:
Title:
Organization:
Address:

Telephone:
E-mail address:

The Technical Authority named above 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 Technical Authority, however the Technical 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.

5.3 Contractor's Representative

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: ____ - ____ - _____

Facsimile: ____ - ____ - _____

E-mail address: _____

6. Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a Public Service Superannuation Act (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with Contracting Policy Notice: 2012-2 of the Treasury Board Secretariat of Canada.

7. Payment

7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price of \$ _____ (*insert the amount at contract award*). Customs duties are _____ (*insert "included", "excluded" OR "subject to exemption"*) 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.

7.2 Limitation of Expenditure

- (a) Canada's total liability to the Contractor under the Contract must not exceed \$ _____. Customs duties are (*insert "included", "excluded" or "subject to exemption"*) and Applicable Taxes are extra.
- (b) No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
- (i) when it is 75 percent committed, or
 - (ii) four (4) months before the contract expiry date, or
 - (iii) as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,
- whichever comes first.
- (c) If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

8 Invoicing Instructions

8.1 Milestone Payment

- (a) Canada will make milestone payments in accordance with the Schedule of Milestones detailed below and the payment provisions of the Contract if:
- (i) an accurate and complete claim for payment and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (ii) all such documents have been verified by Canada;
 - (iii) all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.

8.2 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Table 1

Item	Description of Deliverable	Schedule
0.	<i>Kick-off Meeting via Conference Call</i>	No later than ten (10) business days after award of this contract.
1.	Updated and new CWEEDS files for locations with at least 10 years of data for the period 1998-2014 incorporating SUNY solar radiation data and with gaps due to missing data filled in solar radiation, temperature, dew point, wind speed and direction, station pressure and snow on ground fields for the period 1998-2014	March 31, 2016
2.	CWEC and TDY files for each CWEEDS location generated from the period 1998-2014	March 31, 2016
3.	Hourly, monthly average, and yearly average files with solar radiation on a south-facing surface tilted at the angle of the latitude of the SUNY grid point for each grid point in Canada	March 31, 2016
4.	Hourly files for each SUNY grid point in Canada in EPW format incorporating temperature, dew point, wind speed and direction, surface pressure and snow on ground data from the nearest NARR grid point; individual hourly files will be provided for each year from 1998-2014 and for the CWEC and TDY file selected from 1998-2014.	March 31, 2016
5.	Final report documenting the work done, procedures used and the organization of the data files provided.	March 31, 2016

9. Certifications

9.1 Compliance

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

10. Applicable Laws

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

11. 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) Modified 2010B General Conditions - [Professional Services \(Medium Complexity\)](#) (*insert date*)
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) the Contractor's bid dated _____, (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award: "as clarified on _____" or "as amended on _____" and insert date(s) of clarification(s) or amendment(s).*)

ANNEX A

Statement of Work – Updating CWEEDS Weather Files

Introduction:

The Meteorological Service of Canada (MSC) of Environment Canada (EC) is conducting a PERD (Federal Panel on Energy R&D)-funded project to update Canadian Weather Energy and Engineering Data Set (CWEEDS) and Canadian Weather year for Energy Calculation (CWEC) hourly weather files. CWEC files are the length of one calendar year and represent a “typical” year by providing the most typical month from the long-term CWEEDS files. Each typical month is selected by the TMY (typical meteorological year) method. These files are specifically formatted for use in designing and planning building and solar energy systems. They provide location-specific hourly weather data as input for industry design tools such as Energy Plus (<http://apps1.eere.energy.gov/buildings/energyplus/>) for building energy simulation and SAM (<https://sam.nrel.gov/>) for solar energy system simulation.

The current set of CWEEDS and CWEC files include data as recent as 2005 and are available along with documentation on the EC ftp site:

ftp://ftp.tor.ec.gc.ca/Pub/Engineering_Climate_Dataset/Canadian_Weather_Energy_Engineering_Datas_et_CWEEDS_2005/ZIPPED%20FILES/ENGLISH/.

This project concerns updating and expanding this set of files. In addition to updating these files with the most recent data, the following changes will be implemented:

- The CWEEDS file locations corresponding to the 2005 legacy locations will be updated with the following enhancements:
 - GOES satellite-derived solar radiation data from the State University of NY (SUNY) available from 1998-2014 at a 10 km grid for all points in Canada south of 58N will be incorporated into the files for locations and periods for which observed in-situ solar radiation data is not available

Note: The successful bidder will have to sign a non-disclosure agreement with supplier of the satellite-derived solar radiation data.

- Gaps due to missing surface observations (solar radiation, temperature, dew point, wind speed and direction, surface pressure and daily snow on the ground) will be filled so that the files are serially complete for the period 1998-2014
- New CWEEDS files will also be generated based on hourly data availability (at least 10 complete years) for the period 1998-2014
- Distribution of CWEEDS files will only done by EC.

- For each updated CWEEDS file, in addition to CWEC files used for building energy simulation, TMY files selected on direct normal solar radiation (TDY files) will be generated for concentrating solar energy applications
- The TMY files (CWEC, TDY) will be provided in EPW format (the native weather file format of Energy Plus)
- A new data set will be generated by modifying the hourly SUNY data for each grid point over Canada by calculating the solar radiation amounts corresponding to a south-facing surface tilted at the angle of the latitude of the grid point
- A new data set will be generated by merging the SUNY irradiance data at each grid point with surface data for selected elements from the closest NARR reanalysis data at 32-km grid point spacing to greatly increase the spatial coverage of the files

Deliverables (due March 31, 2016):

- 1) Updated and new CWEEDS files for locations with at least 10 years of data for the period 1998-2014 incorporating SUNY solar radiation data and with gaps due to missing data filled in solar radiation, temperature, dew point, wind speed and direction, station pressure and snow on ground fields for the period 1998-2014
- 2) CWEC and TDY files for each CWEEDS location generated from the period 1998-2014
- 3) Hourly, monthly average, and yearly average files with solar radiation on a south-facing surface tilted at the angle of the latitude of the SUNY grid point for each grid point in Canada
- 4) Hourly files for each SUNY grid point in Canada in EPW format incorporating temperature, dew point, wind speed and direction, surface pressure and snow on ground data from the nearest NARR grid point; individual hourly files will be provided for each year from 1998-2014 and for the CWEC and TDY file selected from 1998-2014.
- 5) Final report documenting the work done, procedures used and the organization of the data files provided.

Tasks Required for this Project:

The project has a number of discrete tasks in generating the deliverables. These are described below. EC has software, documentation and data files for use in some of the processing steps. The appendix to this document provides a description of this material that will be made available for this project.

- CWEEDS files are generated from EC climatological data sets and SUNY data sets with HORZ software provided by EC. A first step in this approach will be to determine which locations have suitable observing data for generating updated and new CWEEDS files. Where there have been changes in observing programs at locations including opening and closing of collocated stations,

appropriate periods from each station will be selected and their data merged to form a single data set covering at least 10 years in the period 1998-2014. At some stations daily snow on the ground files are missing especially in recent years. Gridded snow depth data files are available from http://nsidc.org/data/docs/daac/nsidc0447_CMC_snow_depth/index.html. Daily snow depth data from this source may be abstracted and used to fill periods during which station observations are not available.

- Short gaps (up to a few days) in solar radiation, temperature, dew point, wind speed and direction, station pressure and snow on ground fields for the period 1998-2014 need to be filled by a suitable estimate. These fields are the most important for building energy simulation and serial completeness is required by the simulation tools such as Energy Plus and SAM. The TMY software also requires serial completeness in the elements it uses to select typical months for CWEC/TDY files.
- CWEC and TMY files are generated from CWEDS files using the TMY software provided by EC.
- CWEC and TDY files in the EPW format are generated by the Weather Data utility provided with the Energy Plus software.
- Hourly files of solar radiation on a tilted surface are generated from SUNY data sets by the TILT software provided by EC.
- Hourly files of at SUNY grid points using NARR data sets available from a number of NOAA web sites in different formats. As an example, NARR data in NetCDF format is available from <http://www.esrl.noaa.gov/psd/data/gridded/data.narr.html>
- A number of scripts/software routines will need to be developed for a variety of purposes such as merging data sets, filling gaps, batch processing, extracting and reformatting NARR and gridded snow depth data, etc.
- A final report will document the processing steps taken and the organization and formats of the deliverables

Other Requirements and Conditions:

The MSC will provide required hourly and daily data from the Environment Canada climatological data base and SUNY solar radiation data sets to the successful bidder needed for conducting this project.

The successful bidder agrees that, and will ensure that SUNY data provided by EC for conducting this project or any files incorporating their data are not provided to or further distributed to any other person or agency without first obtaining the permission of the Contract Authority.

The successful bidder will be available for occasional teleconferences or meetings with EC (at 4905 Dufferin Street, Toronto) and NRCAN participants in the project to consult on specific details or provide updates on progress.

Payment will be based on monthly progress reports and invoices from the successful bidder.

Appendix: Description of Software and Files available from Environment Canada

The following describes a variety files available on request from the contract authority that are required for some of the tasks required in this project. This material is provided so potential bidders may gauge the level and nature of the effort needed to conduct this work. Data files are only single examples for this purpose.

A.1 Generating CWEEDS files

HORZ is software that generates CWEEDS files. HORZ is available as an executable file for the Windows command line and the Fortran source code files are also available.

HORZ requires the following files as input.

Lxxxxxx.HLY is a file with HLY01, HLY11 (solar radiation) and HLY10 (minutes of sunshine) hourly data, where xxxxxxx is a placeholder for the EC climate ID of the station. An example file is provided for Buttonville A ON (L615HMAK.HLY).

Lxxxxxx.DLY is a file with DLY04 element 13 (daily snow on the ground). An example file is provided (L615HMAK.DLY).

The HLY and DLY files described above are in the HLY01 and DLY04 file formats documented at: http://climate.weather.gc.ca/prods_servs/documentation_index_e.html.

SUNY_43.85_-79.35_1998-2011.timeseries.csv is a SUNY hourly solar radiation data set for the grid point corresponding to the Buttonville A station above.

PARAM.txt contains the list of locations and related information such as climate IDs, latitude, longitude, elevation, etc. that HORZ requires. The PARAM.txt file and a second file with additional stations that together list all the current CWEEDS file locations are available from the EC ftp site:

ftp://ftp.tor.ec.gc.ca/Pub/Engineering_Climate_Dataset/Canadian_Weather_Energy_Engineering_Dataset_CWEEDS_2005/ZIPPED%20FILES/ENGLISH/.

Documentation for using HORZ is provided in the file "HORZ2011.doc". A list of the several hourly and daily elements required as input for HORZ is provided in this file.

A.2 Generating CWEC and TDY files

CWEC and TDY files are generated from CWEEDS files using TMY software. Executable versions (for CWEC and TDY) for the windows command line and the Fortran source code files are provided.

FT05.DAT and FT07.DAT are text files with station and other information required to run TMY.

The file "TY3_2011 user's notes.docx" provides the user documentation for running the TMY software.

A.3 Generating hourly solar radiation data sets on a south-facing surface tilted at the angle of the location

TILT software is used to generate hourly data sets of solar radiation data on a tilted surface of user-specified tilt and azimuth angles. An executable version and the Fortran source code files are provided.

The file "TILT2011.doc" provides user information for running TILT.

A.4 Generating hourly SUNY files incorporated with the closest NARR surface weather

No specific EC files are provided for this. Scripts/software will be needed to be developed for this purpose.

A.5 Converting CWEC and TDY files to the EPW file format

The Energy Plus weather utility is used to convert various weather data files into the EPW file format which is used by a wide variety of solar and building energy simulation tools. Two files are provided for use with CWEC and TDY files for this purpose. One (presets.def) provides the format information of the CWEEDS files (with a WY3 extension) to Energy Plus. The second (CAN_AB_FORT-MCMURRAY-A_3062697_CWEC2011.def) provides station information. This file is an example for Fort McMurray and will need to be edited to correspond to the CWEC and TDY files being converted.

ANNEX B
BASIS OF PAYMENT

Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No.	Description / Deliverable	Firm Amount	Delivery Date
1	<i>Updated and new CWEEDS files for locations with at least 10 years of data for the period 1998-2014 incorporating SUNY solar radiation data and with gaps due to missing data filled in solar radiation, temperature, dew point, wind speed and direction, station pressure and snow on ground fields for the period 1998-2014</i>		March 31, 2016
2	CWEC and TDY files for each CWEEDS location generated from the period 1998-2014		March 31, 2016
3	Hourly, monthly average, and yearly average files with solar radiation on a south-facing surface tilted at the angle of the latitude of the SUNY grid point for each grid point in Canada		March 31, 2016
4	Hourly files for each SUNY grid point in Canada in EPW format incorporating temperature, dew point, wind speed and direction, surface pressure and snow on ground data from the nearest NARR grid point; individual hourly files will be provided for each year from 1998-2014 and for the CWEC and TDY file selected from 1998-2014.		March 31, 2016
5	Final report documenting the work done, procedures used and the organization of the data files provided.		March 31, 2016
	Total		