



<p>RETURN BIDS TO: RETOURNER LES SOUMISSIONS À:</p> <p>Bid Receiving - Environment Canada / Réception des soumissions – Environnement Canada</p> <p>Email to: ec.soumissions-bids.ec@canada.ca Attention: Angela Quan Solicitation Number: 5000046887</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>SOUSSION 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 Study to Develop a Technical Guidance Document on Methodologies to Estimate, Measure and Monitor Methane Emissions from Landfills</p>	
	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 5000046887</p>	
	<p>Date of Bid solicitation – Date de la demande de soumissions 2019-10-21</p>	
	<p>Bid Solicitation Closes - La demande de soumissions prend fin</p> <p>at – à 2:00 P.M. on – le 2019-12-02</p>	<p>Time Zone – Fuseau horaire</p> <p>Eastern Standard Time</p>
	<p>F.O.B – F.A.B Destination.</p>	
	<p>Address Enquiries to - Adresser toutes questions à Angela Quan angela.quan2@canada.ca</p>	
	<p>Telephone No. – N° de téléphone 514-496-5979</p>	<p>Fax No. – N° de Fax 514-283-4439</p>
	<p>Delivery Required – Livraison exigée See Statement of Work herein.</p>	
	<p>Destination of Services / Destination des services See Statement of Work herein.</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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TITLE: Study to Develop a Technical Guidance Document on Methodologies to Estimate, Measure and Monitor Methane Emissions from Landfills

PART 1 - GENERAL INFORMATION

1. Introduction

The bid solicitation is divided into seven 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 Attachments include the Mandatory Technical Criteria and Point Rated Technical Criteria.

The Annexes include the Statement of Work, the Basis of Payment, the Schedule of Milestones, the Supplier list of names, the Former Public Servant – Competitive Bid Form.

2. Summary

2.1 Environment and Climate Change Canada (ECCC) has a requirement for a study is to develop a technical guidance document that describes recommended methodologies to estimate, measure and monitor methane emissions from landfills as detailed in the Statement of Work, Annex A to the bid solicitation. The period of the contract **is from Contract Award to March 29, 2021.**

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

2.3 For services requirements, bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.

2.4 The requirement is subject to the provisions of the North American Free Trade Agreement (NAFTA), and the Canada Free Trade Agreement (CFTA).

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>) 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 (2018-05-22) 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

Bids must be submitted to Environment and Climate Change Canada (ECCC) at the address and by the date, time and place indicated on page 1 of the bid solicitation.

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 five (5) 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 Quebec.

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:

- 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 separately bound sections as follows:

Section I: Technical Bid (1 soft copy in PDF format by e-mail)

Section II: Financial bid (1 soft copy in PDF format by e-mail)

Section III: Certifications (1 soft copy in PDF format by e-mail)

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

In order to be considered, bids must be received no later than 2:00 P.M. (Eastern Standard Time) on the date and time indicated on the cover page to herein as the "Closing Date." Bids received after the Closing Date will be considered non-responsive and will not be considered for contract award. Bids submitted by email must be submitted **ONLY** to the following email address:

Email Address: ec.soumissions-bids.ec@canada.ca
Attention: Angela Quan
Solicitation Number: 5000046887

Bidders should ensure that their name, address, Closing Date of the solicitation and Solicitation Number are clearly indicated in the body of their email. Bids and supporting information may be submitted in either English or French.

The total size of the email, including all attachments, must be less than **15 megabytes (MB)**. It is each Bidder's responsibility to ensure that the total size of the email does not exceed this limit.

Bids sent by fax will not be accepted. Bidders should ensure that their name, address, Closing Date of the solicitation and Solicitation Number are clearly indicated in the body of their email. Bids and supporting information may be submitted in either English or French.

It is important to note that emails systems can experience systematic delays and, at times, large attachments may cause systems to hold or delay transmission of emails. It is solely the Bidder's responsibility to ensure that the Contracting Authority receives a bid on time, in the mailbox that has been identified for bid receipt purposes. Date stamps for this form of transmission are not acceptable.

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.

Part 4, Evaluation Procedures, contains additional instructions that bidders should consider when preparing their technical bid

Section II: Financial Bid

1.1 Bidders must submit their financial bid in Canadian funds and in accordance with the Basis of Payment in Annex B. The total amount of Applicable Taxes must be shown separately. The total amount of Applicable Taxes must be shown separately. All information relating to price must appear only in the financial bid. No prices must be indicated in any other section of the bid.

Bidders must submit their prices FOB destination; Canadian customs duties and excise Taxes included, as applicable; and Applicable Taxes excluded.

1.2 Price Breakdown

In their financial bid, the bidders are requested to provide a detailed breakdown of the price for the following elements for each milestone 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.
- (b) Equipment (if applicable): The bidders should specify each item required to complete the Work and provide the pricing basis of each one, Canadian customs duty and excise taxes included, as applicable. These items will be deliverable to Canada upon completion of the contract.
- (c) Materials and Supplies (if applicable): The bidders should identify each category of materials and supplies required to complete the Work and provide the pricing basis. The Bidder should indicate, on a per category basis, whether the items are likely to be consumed during the performance of any resulting contract.
- (d) Travel and Living Expenses (if applicable): The bidders should indicate the number of trips and the number of days for each trip, the cost, destination and purpose of each journey, together with the basis of these costs without exceeding the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the *National Joint Council Travel Directive* and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".
- (e) Subcontracts (if applicable): The bidders should identify all of the proposed subcontractors and provide in their financial bid for each one a price breakdown.



(f) **Other Direct Charges (if applicable):** The bidders should identify all of the categories of other direct charges anticipated, such as long distance communications and rentals, providing the pricing basis for each and explaining the relevance to the work described in Part 6 of the bid solicitation.

(g) **Applicable Taxes:** The bidders should indicate the Applicable Taxes separately.

1.3 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

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

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.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

See Attachment 1 to Part 4 – Mandatory Requirements and Evaluation Criteria.

1.1.2 Point Rated Technical Criteria

See Attachment 1 to Part 4 – Point Rated Technical Criteria.

1.2 Financial Evaluation

1.2.1 Mandatory Financial Criteria

See Attachment 1 to Part 4 – Mandatory Financial Criteria.

1.2.2 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, the Applicable Taxes excluded, Canadian customs and excise taxes included.

For evaluation purposes only, the price of the bid will be determined as follows:

2. Basis of Selection

Highest Combined Rating of Technical Merit (70%) and Price (30%)

The selection 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.

- (a) To be declared responsive, a bid must:
 - (i) comply with all the requirements of the bid solicitation; and
 - (ii) meet all mandatory criteria; and



- (iii) obtain the required minimum points specified for each criterion for the technical evaluation, and
- (iiii) obtain the required minimum of 20 points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 34 points.

(b) Bids not meeting (i) or (ii) or (iii) and (iiii) will be declared non-responsive.

(c) The selection 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.

(d) 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%.

(e) To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30%.

(f) For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

(g) 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 sum of the technical and financial scores is used to determine the final score. The contract will be awarded to the firm obtaining the highest overall score. Where several bids are equal, the one with the highest technical rating will be selected.

$$\text{Technical Score} = \frac{\text{Bidder's Points}}{34} \times 70\% = \text{XXX}$$

$$\text{Financial Score} = \frac{\text{Lowest Bid}}{\text{Bidder's Cost}} \times 30\% = \text{XXX}$$

$$\text{Total Score} = \text{Technical Score} + \text{Financial Score}$$



Example of calculation

		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		115/135	89/135	92/135
Bid Evaluated Price		\$55,000.00	\$50,000.00	\$45,000.00
Calculations	Technical Merit Score	$115/135 \times 70 = 59,62$	$89/135 \times 70 = 46,14$	$92/135 \times 70 = 47,70$
	Pricing Score	$45/55 \times 30 = 24,54$	$45/50 \times 30 = 27$	$45/45 \times 30 = 30$
Combined Rating		84,16	73,14	77,70
Overall Rating		1st	3rd	2nd



ATTACHMENT 1 TO PART 4

MANDATORY TECHNICAL CRITERIA AND POINT RATED TECHNICAL CRITERIA

MANDATORY TECHNICAL CRITERIA:

<p>The bidder must meet all mandatory requirements described below. These will be evaluated as either “Yes” or “No”. Proposals receiving a “No” for any mandatory requirement will not be considered further.</p> <p>Attention bidders: Indicate in the column beside each criterion the number of the relevant page on which information presented in your proposal addresses the mandatory requirements associated with each criterion.</p>			
Mandatory Requirements	Page #	Yes	No
<p>M1 The bidder must demonstrate in their proposal that the proposed Project Manager has a minimum of ten (10) years of recent (within the last 12 years) experience in researching or undertaking technical assessments of methane generation, measurement and monitoring at landfills.</p> <p>This must be demonstrated in the proposal by providing the Project Manager’s name, current curriculum vitae, and descriptions of the projects/work completed, including timelines.</p>			
<p>M2 The bidder must demonstrate in their proposal the proposed team has a minimum of three (3) key team members each having at least five (5) years experience (within the past ten (10) years) in conducting technical assessments of landfill gas generation, measurement and monitoring.</p> <p>This must be demonstrated in the proposal by providing the names of the key team members, current curriculum vitae for each key team member, and details of how experience was obtained, including timelines.</p>			
<p>M3 The bidder must demonstrate in their proposal that a minimum of one (1) team member is fluently bilingual and capable of delivering a technical presentation in both English and French.</p> <p>This must be demonstrated by identifying the fully bilingual team member in the proposal.</p>			



Mandatory Financial Criteria

Mandatory Criteria	Yes	No
MF1 The maximum budget for this project is \$130,000.00 (excluding taxes). The financial bid must not exceed the maximum budget.		

Point Rated Technical Criteria

Rated Criteria	Page #	Maximum Score	Score
<p>1. Experience and Qualifications of Contractor and Project Team Members</p> <p>Minimum score required: 12 points Maximum score: 21 points</p> <p>To illustrate the experience and qualifications that will be evaluated in the Point Rated Technical Criteria R1, R2, R3 and R4 the Bidder should provide a description of at least five (5) projects or studies completed in the last 10 years in which the project team members participated, that included:</p> <ul style="list-style-type: none"> • estimating and measuring methane generation and emissions from the landfills using a variety of methods, including: the use of first order decay models and through field studies including flux measurement and surface emission monitoring; • developing technical guidance to support engineering and scientific evaluations; • developing spreadsheet tools to calculate methane emissions from landfills; and, • writing reports and delivering technical presentations on estimating, measuring and monitoring methane generation and emissions from landfills. <p>Each project description should be no more than one (1) page, and include the following:</p> <ul style="list-style-type: none"> • Project title, client name, industry sector; • Verification project was completed within proposed budget; • Nature of services provided by the Bidder for the project or study, methodologies and approaches employed; • Topics addressed; • Name of project manager and key project team members and their roles in the project; • Name of contact to validate information. 			



<p>Experience claims must be supported by examples, and must provide sufficient detail to provide a clear understanding of the work performed.</p>			
<p>R1 - Experience and expertise using a variety of approaches Members of the bidder’s project team have recent, (within the last 5 years), and relevant experience. Relevant experience is experience and expertise estimating, measuring and monitoring methane generation and emissions at landfills using a variety of approaches.</p> <p>0 Points - The proposal does not demonstrate relevant and/or recent experience or knowledge of the proposed project team.</p> <p>3 Points - The proposal demonstrates some relevant and recent experience and expertise of the proposed project team. Demonstrates is defined as at least one (1) of the project team members having experience working on at least one (1) project in the last five (5) years that included estimating, measuring and/or monitoring methane generation and emissions at landfills using a variety of approaches.</p> <p>5 Points - The proposal sufficiently demonstrates relevant and recent experience and expertise of the proposed project team. Sufficiently demonstrates is defined as, at least two (2) of the project team members each having experience working on at least three (3) projects in the last five (5) years that included estimating, measuring and/or monitoring methane generation and emissions at landfills using a variety of approaches.</p> <p>10 Points - The proposal strongly demonstrates relevant and recent experience and expertise of the project team. Strongly demonstrates is defined as, at least two (2) of the project team members each having experience working on at least five (5) projects in the last five (5) years that included estimating, measuring and/or monitoring methane generation and emissions at landfills using a variety of approaches.</p>		<p>10 points</p>	
<p>R2 – Development of technical guidance materials to support engineering assessments Members of the bidder’s project team have recent (within the last 5 years) and relevant experience. Relevant experience is experience and expertise developing technical guidance materials to support engineering assessment.</p>		<p>3 points</p>	



<p>0 Points - The proposal does not demonstrate relevant and recent experience of the proposed project team members developing technical guidance materials to support engineering assessments.</p> <p>1 Point - The proposal demonstrates some relevant and recent experience of the proposed project team, including evidence of at least one (1) of the project team members having experience working on at least one (1) project in the last five (5) years developing technical guidance materials to support engineering assessments.</p> <p>2 Points - The proposal sufficiently demonstrates relevant and recent experience of the proposed project team, including evidence of at least one (1) of the project team members having experience working on at least two (2) projects in the last five (5) years developing technical guidance materials to support engineering assessments.</p> <p>3 Points - The proposal strongly demonstrates relevant and recent experience of the project team, including evidence of at least one (1) of the project team members having experience working on at least three (3) projects in the last five (5) years developing technical guidance materials to support engineering assessments.</p>			
<p>R3 – Developing spreadsheet tools to calculate methane emissions from landfills Members of the bidder’s project team have recent, (within the last 5 years), and relevant experience and expertise. Relevant is experience and expertise developing spreadsheet tools to calculate methane emissions from landfills.</p> <p>0 Points - The proposal does not demonstrate relevant and recent experience or expertise of the proposed project team.</p> <p>1 Point - The proposal demonstrates some relevant and recent experience and expertise of the proposed project team, including evidence of at least one (1) of the project team members having experience working on at least one (1) project, in the last five (5) years, developing spreadsheet tools to calculate methane emissions from landfills.</p> <p>2 Points - The proposal sufficiently demonstrates relevant and recent experience and expertise of the proposed project team, including evidence of at least one (1) of the project team members having experience working on at least two (2) projects, in the last five (5) years, developing spreadsheet tools to calculate methane emissions from landfills.</p>		<p>3 points</p>	



<p>3 Points - The proposal strongly demonstrates relevant and recent knowledge and expertise of the project team, including evidence of at least one (1) of the project team members having experience working on at least three (3) projects, in the last five (5) years, developing spreadsheet tools to calculate methane emissions from landfills.</p>			
<p>R4 – Report writing and presentation of technical information The bidder’s project team has recent experience (within the last 5 years) and relevant expertise – defined as expertise in report writing and delivering technical presentations on estimating, measuring and monitoring methane generation and emissions from landfills.</p> <p>0 Points - The proposal does not demonstrate relevant and recent experience or expertise of the proposed project team.</p> <p>1 Points - The proposal demonstrates some relevant and recent experience and expertise of the proposed project team, including evidence of at least one (1) of the project team member each having experience working on at least one (1) project, in the last five (5) years, involving report writing and delivering technical presentations on estimating, measuring and monitoring methane generation and emissions from landfills.</p> <p>3 Points - The proposal sufficiently demonstrates relevant and recent experience and expertise of the project team, including at least two (2) of the project team members each having experience working on at least two (2) projects, in the last five (5) years, involving report writing and delivering technical presentations on estimating, measuring and monitoring methane generation and emissions from landfills.</p> <p>5 Points - The proposal strongly demonstrates relevant and recent experience and expertise of the project team, including at least two (2) of the project team members each having experience working on at least three (3) projects, in the last five (5) years, involving report writing and delivering technical presentations on estimating, measuring and monitoring methane generation and emissions from landfills.</p>		<p>5 points</p>	



2. Methodology and Work Plan

Minimum score required: 8 points
Maximum score: 13 points

The Bidder should provide a technical proposal including a description of the proposed work plan, project resources, methodology and quality assurance/quality control approach.

<p>R5 – Work plan and project resources</p> <p>0 Points - The proposal does not demonstrate the work plan and project resources.</p> <p>1 Point - The work plan is incomplete, not well defined and/or poorly constructed and does not demonstrate how the allocated resources will meet the objectives, deliverables, and timelines outlined in Annex A, Statement of Work. Resources, and/or roles and team structure as outlined in the proposal do not clearly identify how all the project objectives will be met.</p> <p>3 Points - The work plan is complete and demonstrates a level of confidence that allocated resources will meet the objectives, deliverables and timelines outlined in Annex A, Statement of Work.</p> <p>5 Points - The work plan is complete, very clear and logical and demonstrates a high level of confidence that allocated resources will meet the objectives, deliverables and timelines outlined in Annex A, Statement of Work.</p>		<p>5 points</p>	
<p>R6 – Methodology</p> <p>0 Points - The proposal does not demonstrate the methodology.</p> <p>1 Point - The methodology is lacking detail, and/or is not clear or well defined. The level of confidence is low that the objectives, deliverables and timelines outlined in Annex A, Statement of Work will be met. Most potential challenges are not identified and/or the process for addressing these challenges are not not addressed.</p> <p>3 Points - The methodology provides some detail and most challenges are clear and defined. The level of confidence is moderate that the objectives, deliverables and timelines outlined in Annex A, Statement of Work will be met. Most potential challenges are identified but the proposal lacks details on how the challenges will be addressed, such as: possible information sources, steps and mitigation.</p>		<p>5 points</p>	



<p>5 Points - The methodology is clear, logical, and detailed and most or all challenges are defined. The level of confidence is high that the objectives, deliverables and timelines outlined in Annex A, Statement of Work will be met. Most or all potential challenges are identified and the proposal provides clear detail on how the challenges will be addressed, such as: possible information sources, steps and mitigation.</p>			
<p>R7 – Proposed Quality Assurance/Quality Control</p> <p>0 Point – No Quality Assurance/Quality Control process is outlined in the proposal</p> <p>1 Point - Proposed approach to ensure quality control throughout the project and/or how it has been applied successfully in previous projects lacks most or all details and/or is not well defined. There is a low level of confidence the Quality Assurance and Quality Control process outlined in the proposal will address most or all aspects of the work, as outlined in Annex A, Statement of Work.</p> <p>2 Points - Proposed approach to ensure quality control throughout the project and how it has been applied successfully in previous projects provides some detail and/or is not well defined. There is a moderate level of confidence the Quality Assurance and Quality Control process outlined in the proposal will address most or all aspects of the work as outlined in Annex A, Statement of Work.</p> <p>3 Points - Proposed approach to ensure quality control throughout the project and how it has been applied successfully in previous projects is comprehensive, contains all or most details, well-defined. There is a high level of confidence the Quality Assurance and Quality Control process outlined in the proposal will address most or all aspects of the work as outlined in Annex A, Statement of Work.</p>		<p>3 points</p>	
<p>Total Points</p>		<p>Maximum possible Points: 34 points</p> <p>Passing mark: 20 points</p>	



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.

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.

2.2 Education and Experience

PWGSC SACC Manual clause A3010T (2010-08-16) Education and Experience

2.3 Former Public Servant – Competitive Bid

PWGSC SACC Manual clause A3025T (2014-06-26) Former Public Servant – Competitive Bid

3. Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

PART 6 – RESULTING CONTRACT

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

1. Statement of Work

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

2. 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.

2.1 General Conditions

2010B (2018-06-21), 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.

3. Security Requirement

3.1 There is no security requirement applicable to this Contract.



4. Term of Contract

4.1 Period of the Contract

The period of the Contract is from date of Contract to **March 29, 2021 inclusive.**

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Angela Quan

Procurement Specialist
Environment and Climate Change Canada
105 McGill, 5th Floor, Montreal QC H2Y 2E7
Telephone: 514-496-5979
Facsimile: 514-283-4439
Email address: angela.quan2@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

The Technical Authority for the Contract is:

(It will be inserted at contract award.)

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ____ - ____ - _____
Facsimile: ____ - ____ - _____
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

The Contractor's Representative for the Contract is:

(It will be inserted at contract award.)



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

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, as determined in accordance with the Basis of Payment in Annex B, to a limitation of expenditure of \$ _____ (*the amount will be inserted at contract award*). Customs duties are included and Applicable Taxes are extra.

7.2 Limitation of Expenditure

- (a) Canada's total liability to the Contractor under the Contract must not exceed \$ _____ (*the amount will be inserted at contract award*). Customs duties are included and the 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.

7.3 Terms of Payment

H1008C (2008-05-12) Monthly Payment

7.4 PWGSC SACC Manual Clauses

A9117C (2007-11-30) T1204 - Direct Request by Customer Department

7.5 Time Verification

C0711C (2008-05-12) Time Verification

8. Invoicing Instructions

8.1 Milestone Payments

8.1.1 Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex C of the Contract and the payment provisions of the Contract if:

- (a) 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;
- (b) all such documents have been verified by Canada;
- (c) the Work delivered has been accepted by Canada.
- (d) all work associated with the milestone and, as the case may be, all deliverable required have been completed and accepted by Canada.

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 Quebec.

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) 2010B General Conditions - Professional Services (Medium Complexity) (2018-06-21) as modified;
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) Annex C, Schedule of Milestones;
- (f) Annex D, Supplier list of names
- (g) Annex E, Former Public Servant – Competitive Bid Form
- (h) the Contractor's bid dated _____, as clarified on _____ or as amended on _____. *(It will be inserted at contract award.)*

ANNEX A STATEMENT OF WORK

Title: Study to Develop a Technical Guidance Document on Methodologies to Estimate, Measure and Monitor Methane Emissions from Landfills

SW01 Purpose:

The objective for this study is to develop a technical guidance document that describes recommended methodologies to estimate, measure and monitor methane emissions from landfills.

SW02 Background:

Environment and Climate Change Canada (ECCC) is undertaking work under the [Strategy on Short-Lived Climate Pollutants](#) to address methane emissions from landfills. Although significant efforts have been made to control methane emissions from this source in Canada, there remain opportunities for further reductions.

A study conducted for ECCC in 2018 collected background information on current best practices for estimating, measuring and monitoring methane emissions from landfills (SCS Engineers, 2019) (Appendix A). ECCC is interested in building on this study by developing a guidance document that will be a technical reference for regulators, engineering consultants and landfill owners to ensure a consistent approach to quantifying methane generation and emissions from Canadian landfills.

Quantification of methane generation at landfills is undertaken primarily through use of a first-order decay model. There is currently only one existing Canadian specific landfill methane generation model – British Columbia’s LFG Tool. Other models from government agencies in the United States (Environmental Protection Agency and the California Air Resources Board) are also commonly used in Canada. Opportunities exist to improve current modeling approaches by using more precise calculation of certain parameters (e.g. DOC and “k” rather than more general parameters such as L_0). Work under this contract will validate and/or adapt one or more modeling approaches that can be used across Canada to develop consistent estimates of the methane generated at landfills.

The SCS study identified a number of approaches for measuring and monitoring methane emissions at landfills. There are currently no available Canadian guidance documents that provide recommendations on methodologies for measurement and monitoring of landfill gas. A number of methodologies from other jurisdictions exist – including the United States, United Kingdom, Ireland and Australia. Consistent methodologies that can be applied across Canada will improve the quality and consistency of information on methane emissions from landfills.

There is an emerging need for Canadian guidance to support federal reporting, emissions verification and policy decision making. The Government of Canada’s [Greenhouse Gas Reporting Program](#) requires landfills that emit more than 10,000 tonnes of CO₂ equivalents to report emissions annually, however, a methodology has not been identified for a quantification approach. Additionally, landfill gas and organics diversion projects may be eligible to generate offset credits in a Federal GHG Offset System. Offset credit systems typically rely on application of a consistent methodology for quantifying the emissions reductions associated with an activity. The availability of Canadian-specific quantification methodologies will support the identification of action thresholds for methane mitigation; improve decision making on requirements for and

benefits of installing methane recovery infrastructure; and improve prediction of emissions and potential availability of biogas generated in landfills. Better quantification of emissions from landfills will also support future policy decisions for reducing landfill gas emissions in Canada.

SW03 Objective:

Through the development of technical guidance on methodologies for estimating, measuring and monitoring methane emissions at landfills, better data will become available to track and report emissions, and to inform landfill gas management decisions.

SW04 Scope of Work:

Potential users of this guidance document include regulators, landfill owners and engineering consultants. To support the development of this guidance, ECCC will establish a Technical Advisory Group and a consultation process to solicit input on background materials and proposed guidance as it is developed through this contract. Input from stakeholders will be considered in developing the final deliverable.

The Contractor shall complete the following tasks:

Task 1: Prepare comparative summaries of existing approaches for estimating, measuring and monitoring methane emissions at landfills (December 2019 to March 2020)

Undertake a detailed comparative analysis of available approaches, protocols and tools for estimating, measuring and monitoring methane emissions at landfills. Develop a side-by-side comparison of specific elements of approaches and recommendations to support adoption of elements into a Canadian guidance document. Approaches for the following outcomes will be included:

1. Modelling methane generation at landfills and estimating emissions
2. Conducting field monitoring surveys to identify methane emissions
3. Conducting field studies to quantify methane emissions from landfills
4. Monitoring landfill gas recovery systems to quantify methane collection
5. Quantification of emissions, emissions reductions, emissions above regulatory thresholds and collection efficiency

Information sources include, but are not limited to the following:

- Existing published protocols, approaches and tools such as:
 - BC [Landfill Gas Generation Estimation Tool - calculation tool \(XLS\)](#) and [Landfill Gas Generation Estimation Tool - for annual reporting \(XLS\)](#);
 - BC [Greenhouse Gas Offset Protocol – Organic Waste Diversion Public Consultation Draft](#)
 - AB [MSW Landfill K-value Calculation Best Management Practice](#) and models ([LF with LFG collection](#), [LF with partial LFG collection](#) and [LF without LFG collection](#))
 - US EPA [Greenhouse Gas Reporting Program requirements - 40 CFR Part 98. Subpart HH—Municipal Solid Waste Landfills](#)
 - US EPA [Landfill Gas Emissions Model \(LANDGEM\) Version 3.02 User's Guide](#) and [model](#)



- US EPA [Standards of Performance for Municipal Solid Waste Landfills](#) - Final Rule – 40 CFR Part 60. Standards of Performance for Municipal Solid Waste Landfills - § 60.764 Test methods and procedures
 - California Air Resources Board - [Landfill Gas Tool](#) and [Implementation Guidance Document for the Regulation to Reduce Methane Emissions from Municipal Solid Waste Landfills](#)
 - IPCC [Guidelines for National Greenhouse Gas Inventories](#), Volume 5 - Waste
 - Ireland - [Air Guidance Note 6 \(AG6\) Surface VOC Emissions Monitoring on Landfill Facilities](#)
 - Environmental Protection Authority Victoria (Australia) [Landfill Gas Fugitive Emissions Monitoring Guideline](#)
 - UK [Monitoring landfill gas surface emissions: LFTGN 07](#)
 - SCS Engineers – Methods for Estimating, Measuring and Monitoring Landfill Methane Emissions. Report prepared for ECCC. February 2019. (Included in Appendix A)
- Existing approaches utilized by Canadian environmental consultants - conduct at least 10 interviews with Canadian consultants to compile information on existing professional practices related to quantification of methane emissions from landfills in different provinces/regions
 - Emerging technologies able to be utilized in Canada – conduct at least 5 interviews with technology providers to identify the utility of novel approaches to quantify methane emissions from landfills (for example, sensor equipment used on landfill surface to measure flux through cover systems).
 - Recent scientific literature

In order to support the review of contract deliverables by the Technical Advisory Group, ECCC will organize a series of web conferences where Canadian environmental consultants and technology providers can provide an overview of their approaches and capabilities for quantifying methane emissions from landfills. The contractor will be expected to attend these web conferences in order to gain further knowledge of approaches and to hear relevant comments and questions from participants.

The contractor will prepare a comparative analysis of identified methodologies and recommend the most appropriate approach for estimating, measuring and monitoring methane emissions for the five situations identified above. ECCC will review the compiled information and provide comments on the recommended methodologies to be incorporated into presentation materials (Task 2).

Task 2: Presentation of comparative analysis to stakeholders (April to June 2020)

Develop and deliver three presentations (two English, one French) to explain the results of the comparative analysis and describe the methodologies recommended for incorporation into guidance material. These presentations will be provided via web conference to inform

stakeholders of the initiative and facilitate comment on the comparative analysis and recommended methodologies. Presentations will be delivered in both French and English.

Logistics and invitations to the web conferences will be managed by ECCC. ECCC will translate the English presentation into French. Feedback will be solicited from web conference participants, provided to ECCC and shared with the contractor to support the development of the draft technical guidance document.

Task 3: Develop draft technical guidance document (July to September 2020)

Based on the review of information compiled in Task 1 and feedback obtained in Task 2, develop a draft technical guidance document that outlines recommended methodologies for:

1. Modelling methane generation at landfills and estimating emissions
2. Conducting field monitoring surveys to identify methane emissions
3. Conducting field studies to quantify methane emissions from landfills
4. Monitoring landfill gas recovery systems to quantify methane collection
5. Quantification of emissions, emissions reductions and collection efficiency

Separate methodologies for quantification must be developed for landfills with and without landfill gas recovery systems.

ECCC and the Technical Advisory Group will review and provide feedback, which the contractor will incorporate into the draft document. The draft technical guidance document will be translated and posted by ECCC for a public comment period of 60 days. Public comments on the draft guidance document will be provided to ECCC and will be compiled and shared with the contractor for consideration in undertaking Tasks 4 and 5.

Task 4: Develop LFG model to support quantification (October to December 2020)

Based on analysis from Task 1 and stakeholder comments from Task 3, develop or adapt an existing LFG model (excel based) to assist users in modelling of methane generation and calculating methane oxidation and emissions. The model should incorporate a units conversion calculator to assist in interpretation and communication of results.

A draft LFG model will be provided to ECCC and the Technical Advisory Group for review prior to finalizing.

Task 5: Finalize technical guidance document and final LFG Model and Tools (January to March 2021)

Based on stakeholder comments received on the draft technical guidance, and in consultation with ECCC, develop a final technical guidance document. Based on ECCC review, finalize the LFG Model.

SW05 Deliverables and Schedule:

- 1) Summary report and presentations (Task 1);
- 2) Consultation with stakeholders (under Task 2);
- 3) Draft technical guidance (under Task 3);
- 4) Develop LFG Model and Tools to support quantification (under Task 4);

5) Finalize technical guidance document (under Task 5).

The comparative summary and technical guidance reports must be comprehensive, written in a clear, understandable and concise fashion. All deliverables shall be provided in English in electronic format (Microsoft® Excel, Microsoft® Word, Microsoft® PowerPoint or Adobe Acrobat® PDF).

Deliverables 1, 3 and 4: The comparative summary, draft and final guidance documents will be provided as electronic files in Microsoft® Word.

Deliverable 2: A series of presentations will support stakeholder review of the draft guidance document. Presentations will be delivered in both French and English. Deliverable 2 will be provided as electronic files in Microsoft® PowerPoint (in English only) and in person via a web conference (English and French).

Deliverable 4: The landfill gas model will be provided in Microsoft® Excel format.

When appropriate, and upon request, the Contractor will provide a separate document responding to ECCC's comments on any of the deliverables.

DELIVERABLE SCHEDULE:

A project initiation conference call will be held as soon as possible after the contract is awarded.

The Contractor shall also plan on bi-weekly conference calls with the project manager for the duration of the project.

Schedule of Deliverables	
Deliverable Numbers – as per the Statement of Work and Deliverables and Schedule	Date Due On or Before:
	Contract Start Date
Task 1	No later than March 30, 2020
Task 2	Twenty-nine weeks after project start date (April to June 2020)
Task 3	Forty-two weeks after project start date (July to September 2020)
Task 4	Fifty-five weeks after project start date (October to December 2020)
Task 5	No later than March 29, 2021

ANNEX B BASIS OF PAYMENT

The Bidder must complete the Financial Bid Table provided below for the contract period. The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

The price proposal should indicate a detailed breakdown of the total quoted price. The price proposal should address each of the following as applicable:

- (a) Labour
- (b) Equipment (if applicable)
- (c) Supplies (if applicable)
- (d) Travel (if applicable)

Table 1: Period of the contract: Date of Contract to March 29, 2021 inclusive

DELIVERABLES	Total Cost (\$ CAD)
Task 1: Prepare comparative summaries of existing approaches for estimating, measuring and monitoring methane emissions at landfills	_____ \$
Task 2: Presentation of comparative analysis to stakeholders	_____ \$
Task 3: Develop draft technical guidance document	_____ \$
Task 4: Develop LFG model to support quantification	_____ \$
Task 5: Finalize technical guidance document and final LFG Model and tools	_____ \$
Total Cost (TPS/TVH excluded)	_____ \$

**ANNEX C
SCHEDULE OF MILESTONES**

Schedule of Deliverables	
Deliverable Numbers – as per the Statement of Work and Deliverables and Schedule	Date Due On or Before:
	Contract Start Date
Task 1	No later than March 30, 2020
Task 2	Twenty-nine weeks after project start date (April to June 2020)
Task 3	Forty-two weeks after project start date (July to September 2020)
Task 4	Fifty-five weeks after project start date (October to December 2020)
Task 5	No later than March 29, 2021



**ANNEX D
SUPPLIER LIST OF NAMES**

Environment and Climate Change Canada has endorsed the Integrity Regime developed and implemented by Public Services and Procurement Canada. By submitting a quote, Contractors agree to comply with the provisions of the Integrity Regime and [Ineligibility and Suspension Policy](#) as well as the [Code of Conduct for Procurement](#). / Environnement et Changement climatique Canada a adopté le régime d'intégrité développé et mis en place par Services publics et Approvisionnement Canada. Les fournisseurs acceptent, en soumettant une proposition, de se conformer aux dispositions du régime d'intégrité et la [Politique d'inadmissibilité et de suspension](#) ainsi que le [Code de conduite pour l'approvisionnement](#).

In accordance with the PWGSC (now PSPC) [Ineligibility and Suspension Policy](#), the following information is to be provided when bidding or contracting.¹ / Selon la [Politique d'inadmissibilité et de suspension](#) de TPSGC (maintenant SPAC), les renseignements suivants doivent être fournis lors d'une soumission ou de la passation d'un marché.¹

*** Mandatory Information / Informations obligatoires**

* Complete Legal Name of Company / Dénomination complète de l'entreprise	
* Operating Name / Nom commercial	
* Company's address / Adresse de l'entreprise	* Type of Ownership / Type d'entreprise
	<input type="checkbox"/> Individual / Individuel <input type="checkbox"/> Corporation / Corporation <input type="checkbox"/> Joint-Venture / Coentreprise
* Board of Directors² / Membres du conseil d'administration² (Or provide the list as an attachment / Ou mettre la liste en pièce-jointe)	
First name / Prénom Last Name / Nom	Position (if applicable) / Position (si applicable)



¹ **List of names:** All suppliers, regardless of their status under the Policy, must submit the following information when participating in a procurement process:

- suppliers that are corporate entities, including those bidding as joint ventures, must provide a complete list of the names of all current directors or, for a privately owned corporation, the names of the owners of the corporation;
- suppliers bidding as sole proprietors, including sole proprietors bidding as joint ventures, must provide a complete list of the names of all owners; or
- suppliers that are a partnership do not need to provide a list of names.

² Board of Governors /Conseil des gouverneurs; Board of Managers /Conseil de direction; Board of Regents /Conseil de régents; Board of Trustees / Conseil de fiducie; Board of Visitors /Comité de réception

Liste des noms: Tous les fournisseurs, peu importe leur situation au titre de la Politique, doivent présenter les renseignements ci-dessous au moment de prendre part à un processus d'approvisionnement:

- les fournisseurs constitués en personne morale, y compris ceux qui présentent une soumission à titre de coentreprise, doivent fournir la liste complète des noms de tous les administrateurs actuels ou, dans le cas d'une entreprise privée, des propriétaires de la société;
- les fournisseurs soumissionnant à titre d'entreprise à propriétaire unique, y compris ceux soumissionnant en tant que coentreprise, doivent fournir la liste complète des noms de tous les propriétaires;
- les fournisseurs soumissionnant à titre de société en nom collectif n'ont pas à soumettre une liste de noms.



ANNEX E FORMER PUBLIC SERVANT – COMPETITIVE BID FORM

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.

Name and Signature

Date