



<p>RETURN BIDS TO: RETOURNER LES SOUMISSIONS À:</p> <p>Bid Receiving - Environment Canada / Réception des soumissions – Environnement Canada</p> <p><u>Angela.quan2@canada.ca</u></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 Best Available Technologies / Best Environmental Practices To Reduce Greenhouse Gas Emissions From Oil Sands Extraction Facilities</p>	
	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 5000040294</p>	
	<p>Date of Bid solicitation (YYYY-MM-DD) – Date de la demande de soumissions (AAAA-MM-JJ) 2018-10-15</p>	
	<p>Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ)</p>	<p>Time Zone – Fuseau horaire <i>Eastern Standard Time</i></p>
	<p>at – à 2:00 P.M. on – le November 27, 2018</p>	
	<p>F.O.B – F.A.B Destination</p>	
	<p>Address Enquiries to - Adresser toutes questions à Angela Quan</p>	
	<p>Telephone No. – N° de téléphone 514-283-0011</p>	<p>Fax No. – N° de Fax 514-496-6247</p>
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA-MM-JJ) See herein</p>	
	<p>Destination - of Services / Destination des services See Herein</p>	
<p>Security / Sécurité <i>There is no security requirement associated with this requirement</i></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>	

TABLE OF CONTENTS

PART 1 – INFORMATION

1. Security Requirement
2. Statement of Work
3. Debriefings

PART 2 – BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions
2. Submission of Bids
3. Former public servants – Competitive Bid
4. Enquiries – Bid Solicitation
5. Applicable Laws
6. Ownership of Intellectual Property Rights in Foreground Information
7. Maximum Funding

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures
2. Basis of Selection

PART 5 – CERTIFICATIONS

1. Certifications Required Precedent to Contract Award
2. Certifications Required with the Bid

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement
2. Statement of Work
3. Standard Clauses and Conditions
4. Term of Contract
5. Authorities
6. Proactive Disclosure of Contracts with Former Public Servants
7. Payment
8. Invoicing Instructions
9. Certifications
10. Applicable Laws
11. Priority of Documents

List of Annexes:

- | | |
|---------|------------------------------|
| Annex A | Statement of Work |
| Annex B | Basis of Payment |
| Annex C | Non-Disclosure Certification |

Best Available Technologies / Best Environmental Practices To Reduce Greenhouse Gas Emissions From Oil Sands Extraction Facilities

PART 1 – GENERAL INFORMATION

1. Security Requirement

1.1 There is no security requirement associated with this requirement.

2. Statement of Work

The Contractor must perform the Work as follows according to Annex A

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):

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 submitted to Environment Canada (EC) at the email 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. Ownership of Intellectual Property Rights in Foreground Information

The Environment and Climate Change Canada agency has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons, as set out in the Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts.

The main purpose of the Contract, or of the deliverables contracted for, is to generate knowledge and information for public dissemination.

7. Maximum Funding

The maximum funding available for the Contract resulting from the bid solicitation is \$110,000.00 (in Canadian dollars) (\$80,000 for Fiscal year 2018 – 2019 and \$30,000 for Fiscal year 2019 – 2020) Applicable Taxes extra. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available

PART 3 – BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

Section I: Technical Bid (1 electronic copy in PDF format)

Section II: Financial Bid (1 electronic copy in PDF format)

Section III: Certifications (1 electronic copy in PDF format)

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

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.

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 received 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.

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>). 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.

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:

- (a) The proposals must not exceed 25 pages (8" x 11") in length and use a size 12 Font.
- (b) The length limit does not include: cover pages, table of contents, graphics or tables that illustrates timelines or detailed work plans and Appendix.
- (c) Graphics and Tables can be 8" x 14" or 8x17".

Section II: Financial Bid

1. Bidders must submit their financial bid in accordance 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.
- (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.
- (c) Subcontracts (if applicable): The bidders should identify all of the proposed subcontractors and provide in their financial bid for each one a price breakdown.
- (d) 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.

**ATTACHMENT 1 TO PART 3
FINANCIAL BID PRESENTATION SHEET**

DELIVERABLE	Deadlines	Financial Bid
Task 1: Overview of GHG emissions from oil sands extraction facilities		
1.1 Draft report chapter: Overview of GHG emissions from oil sands extraction facilities	January 25, 2019	Approximately 20% of the total contract value
1.2 Detailed outline of draft report chapters related to Task 2	January 25, 2019	_____ \$
Task 2: Best available technologies / best environmental practices		
2.1 Draft report chapters for each facility type or as appropriate: Best available technologies/ best environmental practices (BAT/BEP)	March 22, 2019	Approximately 53% of the total contract value
2.2 Draft report chapter: Case studies	March 22, 2019	_____ \$
Task 3: Emerging technologies and practices		
3.1 Draft report chapter: Emerging technologies and practices	April 19, 2019	Approximately 12% of the total contract value
Task 4: Report		
4.1 Complete draft report	May 17, 2019	Approximately 15% of the total contract value
4.2 Final report	June 7, 2019	_____ \$
4.3 All tables listed in the report	June 7, 2019	
Grand Total for bid evaluation		_____ \$

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.

1.2 Technical Evaluation

1.2.1. Mandatory Technical Criteria

	Mandatory Criteria	Yes / No
M1	<p>At least one key team member MUST demonstrate a relevant post-graduate degree in engineering or science such as mechanical engineering, chemical engineering, environmental engineering, civil engineering, or environmental science from a recognized university.</p> <p>*The list of recognized assessment organizations can be found under the Canadian Information Centre for International Credentials website, at the following internet link: http://www.cicic.ca/indexe.stm;</p>	
M2	<p>At least one team member MUST demonstrate they have a minimum of 5 cumulative years' experience relating to the assessment of technologies and practices to reduce GHG emissions in the oil sands extraction sectors. This criterion must be demonstrated by providing a list of projects that have been completed within the past 10 years (e.g. since November 1 2008).*</p> <p>. *Projects with duration of 0-6 months will not be taken into account.</p>	
M3	<p>At least one team member MUST demonstrate they have a minimum of 5 cumulative years of experience relating to the design of industrial systems for oil sands extraction facilities.. This criterion must be demonstrated by providing a list of projects that have been completed within the past 10 years (e.g. since</p>	

	November 1 2008).* *Projects with duration of 0-6 months will not be taken into account.	
M4	At least one team member MUST demonstrate they have a minimum of 5 cumulative years of experience relating to conducting, advising, or preparing project proposals in the context of environmental / impacts assessments. This criterion must be demonstrated by providing a list of projects that have been completed within the past 10 years (e.g. since November 1 2008).* *Projects with duration of 0-6 months will not be taken into account.	

1.2 Technical Evaluation
1.2.2 Point Rated Technical Criteria

Rated Criteria	Maximum Score	Score
R1. Methodological approach (Minimum score: 13, maximum: 20)		
<p>Proposal demonstrates a comprehensive methodological approach to complete all aspects of the project including:</p> <p>A) The proposed methodological approach</p> <p>(14 pts) The methodological approach includes a detailed description of each step that will be undertaken to meet each deliverable in the Statement of Work. The approach is complete, realistic and feasible and offers advantages with trade-off justifications; it highlights multiple and varied data sources; and it addresses all key oil sands extraction facility types. The proposed methodology has a detailed description to reasonably expect the success of the Project on GHG emission reduction through BAT/BEP with associated costs, technical and environmental considerations.</p> <p>(10.5 pts) The methodological approach includes a description of each step that will be undertaken to meet each deliverable in the Statement of Work, but is a) missing a key step; b) some steps are not realistic or feasible; OR c) key data sources are not provided. The approach offers some advantages with trade-off justifications. The proposed methodological approach addresses all</p>	14 points	

Rated Criteria	Maximum Score	Score
<p>key oil sands extraction facility types and has a detailed description to reasonably expect the success of the Project on GHG emission reduction through BAT/BEP with associated costs, technical and environmental considerations.</p> <p>(7 pts) The methodological approach includes a description of each step that will be undertaken to meet each deliverable in the Statement of Work, but is a) missing a key step; b) some steps are not realistic or feasible; OR c) key data sources are not provided. The approach offers some advantages with trade-off justifications. The proposed methodological approach does not address all key oil sands extraction facility types.</p> <p>(3.5 pts) The methodological approach is incomplete (missing some oil sands extraction facility types, limited data sources), not realistic or not feasible, and the approach is not convincingly advantageous.</p> <p>(0 pts) There is no methodological approach in the proposal.</p>		
<p>B) Possible problems and challenges that could impact the quality and/or delivery of the project and proposed solutions</p> <p>(6 pts) Possible problems and challenges that could arise that would impact the quality and/or delivery of the project are clearly described; the proposed solutions are realistic and within the scope of the project.</p> <p>(4 pts) Possible problems and challenges that could arise that would impact the quality and/or delivery of the project are described but incomplete; the proposed solutions are not realistic and within the scope of the project.</p> <p>(2 pts) Possible problems and challenges that could arise that would impact the quality and/or delivery of the project are not clearly described or are incomplete OR the proposed solutions are not sufficient to address the issues or are outside the scope of the project as described in the Statement of Work.</p> <p>(0 pts) Possible problems and challenges that could arise that would impact the quality and/or delivery of the project</p>	6 points	

Rated Criteria	Maximum Score	Score
are not described and do not demonstrate a complete understanding of the project.		
R2. Work plan and Schedule (Minimum score: 16, maximum: 25)		
<p>A) Proposal provides a detailed schedule and work plan which demonstrates a commitment to meeting the project objectives and deliverables on time within the budget. The following rating scheme will be used to evaluate this criterion:</p> <p>(10 pts) The work plan demonstrated that the proposed project will meet the time schedule and budget requirements requested in the Statement of work, it explains in a clear and logical manner all the tasks and deliverables that will be needed to reach the Objectives of the Statement of Work.</p> <p>(7.5 pts) The work plan demonstrated that the proposed project will meet the time schedule and budget requirements requested in the Statement of work; key tasks are included but not explained in a clear and logical manner how they will reach the Objectives of the Statement of Work.</p> <p>(5 pts) The work plan demonstrated that the proposed project will meet the time schedule and budget requirements requested in the Statement of Work; but key tasks are missing to reach the objectives of the Statement of Work.</p> <p>(2.5 pts) The work plan did not demonstrate that the proposed project will meet the time schedule or budget requirements requested in the Statement of Work; key tasks are missing to reach the objectives of the Statement of Work.</p> <p>(0 pts) The Contractor did not include a schedule or work plan in the proposal OR the work plan does not demonstrate that the proposed project will meet the time schedule and budget requirements requested in the Statement of Work.</p>	10 points	
<p>B) In the work plan, qualified and experienced personnel are assigned to each Task:</p>		
<p>(12 pts) For each Task, all the personnel assigned to the Task</p>	12 points	

Rated Criteria	Maximum Score	Score
<p>are each qualified for the task and have experience relevant to their assigned role in successfully completing the Task;</p> <p>(9 pts) For some Tasks, only some personnel assigned to the Task are qualified and have experience relevant to their assigned role in successfully completing the Task but the overall project team can deliver;</p> <p>(6 pts) For key Tasks , the personnel assigned are not qualified and/or not experienced to ensure successful completion of the Project;</p> <p>(3 pts) For most key tasks, the personnel assigned are not qualified and not experienced to ensure successful completion of the Task or are not identified;</p> <p>(0 pts) The personnel assigned to each task are not identified.</p>		
<p>C) In the work plan, quality assurance is addressed throughout the project. The following rating scheme will be used to evaluate this criterion:</p> <p>(3 pts) Quality assurance is addressed throughout the project, measures used for quality assurance are described and are sufficient to ensure the quality of all deliverables.</p> <p>(1.5 pts) Quality assurance is addressed but measures used for quality assurance are not described and are not sufficient to ensure the quality of all deliverables.</p> <p>(0 pts) Quality assurance is not addressed.</p>	3 points	
<p>R3 Project Team Experience (Minimum score: 30, maximum: 40)</p>		
<p>A) <u>Topic 1</u> Experience in the assessment of technologies and practices to reduce GHG emissions in oil sands extraction facilities in the context of environmental/impacts assessments. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>A maximum of five (5) reference projects should be presented</p>	<p>20 points (A1: 16 pts A2: 4 pts)</p>	

Rated Criteria	Maximum Score	Score
<p>for each topic, in tabular format. If more than five (5) referenced projects are submitted, only the first five (5) in order of presentation will be evaluated. All referenced projects must have been performed within the last five (5) years from the date of bid closing, and include the client organization, project start and end dates, and project description.</p> <p>Points will be awarded in two categories, based on the project descriptions and discussion provided by the proponent in the proposal section titled <i>Qualification and Experience</i>:</p> <p><i>A1: Facility types</i></p> <p>(16 pts) The bidder has significant relevant experience in the assessment of technologies and practices to reduce GHG emissions from four types of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>(12 pts) The bidder has significant relevant experience in the assessment of technologies and practices to reduce GHG emissions from three types of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>(8 pts) The bidder has significant relevant experience in the assessment of technologies and practices to reduce GHG emissions from two types of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage</p>		

Rated Criteria	Maximum Score	Score
<p>(SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>(4 pts) The bidder has significant relevant experience in the assessment of technologies and practices to reduce GHG emissions from one type of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>(0 pts) The bidder has no experience in the assessment of technologies and practices to reduce GHG emissions from oil sands extraction facilities.</p>		
<p><i>A2: Environmental/Impacts assessment</i></p>		
<p>(4 pts) At least four of the bidder's referenced projects related to assessing technologies and practices to reduce GHG emissions from oil sands extraction were conducted in the context of environmental/impacts assessments.</p>		
<p>(3 pts) Three of the bidder's referenced projects related to assessing technologies and practices to reduce GHG emissions from oil sands extraction were conducted in the context of environmental/impacts assessments.</p>		
<p>(2 pts) Two of the bidder's referenced projects related to assessing technologies and practices to reduce GHG emissions from oil sands extraction were conducted in the context of environmental/impacts assessments.</p>		
<p>(1 pt) One of the bidder's referenced projects related to assessing technologies and practices to reduce GHG emissions from oil sands extraction was conducted in the context of environmental/impacts assessments.</p>		
<p>(0 pts) The bidder's referenced projects related to assessing technologies and practices to reduce GHG emissions from oil sands extraction were not conducted in the</p>		

Rated Criteria	Maximum Score	Score
context of environmental/impacts assessments.		
<p>B) <u>Topic 2</u> Experience in designing industrial systems for oil sands extraction facilities in the context of environmental/impacts assessments. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>A maximum of five (5) reference projects should be presented for each topic, in tabular format. If more than five (5) referenced projects are submitted, only the first five (5) in order of presentation will be evaluated. All referenced projects must have been performed within the last five (5) years from the date of bid closing, and include the client organization, project start and end dates, and project description.</p> <p>Points will be awarded in two categories, based on the project descriptions and discussion provided by the proponent in the proposal section titled <i>Qualification and Experience</i>:</p> <p><i>B1: Facility types</i></p> <p>(16 pts) The bidder has significant relevant experience in designing industrial systems from four types of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p> <p>(12 pts) The bidder has significant relevant experience in designing industrial systems from three types of oil sands extraction facilities. The extraction methods in</p>	<p>20 points</p> <p>(B1: 16 pts B2: 4 pts)</p>	

Rated Criteria	Maximum Score	Score
<p>oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p>		
<p>(8 pts) The bidder has significant relevant experience in designing industrial systems from two types of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p>		
<p>(4 pts) The bidder has significant relevant experience in designing industrial systems from one type of oil sands extraction facilities. The extraction methods in oil sands facilities include oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).</p>		
<p>(0 pts) The bidder has no experience designing industrial systems for oil sands extraction facilities.</p>		
<p><i>B2: Environmental/Impacts assessment</i></p>		
<p>(4 pts) At least four of the bidder's referenced projects related to designing industrial systems from oil sands extraction were conducted in the context of environmental/impacts assessments.</p>		
<p>(3 pts) Three of the bidder's referenced projects related to designing industrial systems from oil sands extraction were conducted in the context of environmental/impacts assessments.</p>		
<p>(2 pts) Two of the bidder's referenced projects related to</p>		

Rated Criteria	Maximum Score	Score
<p>designing industrial systems from oil sands extraction were conducted in the context of environmental/impacts assessments.</p> <p>(1 pt) One of the bidder’s referenced projects related to designing industrial systems from oil sands extraction were conducted in the context of environmental/impacts assessments.</p> <p>(0 pts) The bidder’s referenced projects related to designing industrial systems from oil sands extraction were not conducted in the context of environmental/impacts assessments.</p>		
R4 Project Manager’s Experience (Minimum score: 10, maximum: 15)		
<p>A) The bidder should demonstrate, using project description(s), that the proposed Project Manager has the following experience on projects of similar scope and budget related to the assessment and design of GHG emission reduction technologies in the oil sands extraction sector.</p> <p>A maximum of two (2) reference projects will be evaluated as described below. If the bidder submits more than two (2) referenced projects, only the first two (2) in order of presentation will be evaluated. All referenced projects must have been performed within the last five (5) years from the date of bid closing.</p> <p>(6 pts) The Project Manager managed projects of similar or greater scope and budget and which are closely related to the assessment and design of technologies and practices to reduce GHG emissions in the oil sands extraction sector.</p> <p>(4 pts) The Project Manager managed projects of similar or of greater scope and budget and which are partially related to the assessment and design of technologies and practices to reduce GHG emissions in the oil sands extraction sector.</p> <p>(2 pts) The referenced projects are smaller in terms of scope or budget but are related to the assessment and design of technologies and practices to reduce GHG emissions in the oil sands extraction sector.</p>	<p>12 points (maximum of 6 points per project)</p>	

Rated Criteria	Maximum Score	Score
(0 pts) No reference project provided.		
B) Details on back-up arrangements for the Project Manager and their capabilities (3 pts) The arrangements for the back-up Project Manager are presented and the back-up Project Manager is qualified to act as Project Manager; (1.5 pts) The back-up arrangements are not clearly presented OR the proposed back-up Project Manager does not meet many of the project management requirements; (0 pts) There is no mention of the back-up Project Manager or of his/her qualifications.	3 points	
Total Minimal points required: 60 points.	100 points	

1.3 Financial Evaluation

1.3.1 Mandatory Financial Criteria

Environment and Climate Change Canada has established funding for this project at a maximum amount of \$110,000.00 (in Canadian dollars) (\$80,000 for Fiscal year 2018 – 2019 and \$30,000 for Fiscal year 2019 – 2020) – excluding taxes

1.3.2 Evaluation of Price

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

2. Basis of Selection

A bid must comply with all requirements of the bid solicitation to be declared responsive.

Basis of Selection - Highest Combined Rating of Technical Merit and Price

1. To be declared responsive, a Bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. meet all mandatory criteria; and
 - c. obtain the **required minimum points in of 60** for the technical evaluation, and

The rating is performed on a scale of 100 points.

2. Bids not meeting (a), (b), (c) will be declared non-responsive.

3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 75% for the technical merit and 25% for the price.

4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 75%.

5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 25%.

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

7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The example below illustrates an example where all three bids are responsive and the selection of the contractor is determined by the above mentioned ratio of technical evaluation criteria and pricing scores.

Formula:

$$\frac{\text{Bidder's Rated Score}}{\text{Highest Bidder's Rated Score}} \times 75 + \frac{\text{Lowest Bidder's Price}}{\text{Bidder's Price}} \times 25$$

Example:

Description	Bidder A	Bidder B	Bidder C
Bidder Proposal Points Received	100	85	75
Bidder Proposed Price	\$75,000	\$81,000	\$71,000

Final Evaluation Score Calculation:

Bidder	Points for Proposal Score	Points for Price	Total Points
Bidder A	$(100 / 100) \times 75 = 75$	$(71,000 / 75,000) \times 25 = 23.6$	98.66
Bidder B	$(85 / 100) \times 75 = 63.75$	$(71,000 / 81,000) \times 25 = 21.91$	85.66
Bidder C	$(75 / 100) \times 75 = 56.25$	$(71,000 / 71,000) \times 25 = 25$	81.25

In this example, Bidder A will be recommended for Contract award.

In the event of a tie, the proposal receiving the highest score for the technical evaluation will be selected.

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

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

PART 6 - RESULTING CONTRACT

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

Title: *(insert title at contract award)*

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 (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 the Contractor.
3. The Contractor grants to Canada a non-exclusive, perpetual, irrevocable, world-wide, fully-paid and royalty-free license to exercise all rights comprised in the Material, for any non-commercial government purposes. Canada may use independent contractors in the exercise of Canada's license pursuant to this clause.
4. 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.
5. The Contractor also grants to Canada a non-exclusive, perpetual, irrevocable, world-wide, 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.
6. Copyright in any improvement, modification or translation of the Material made by or for Canada belongs to Canada. Canada agrees to reproduce the Contractor's copyright notice, if any, on all copies of the Material, and to acknowledge the Contractor's title to the copyright in the original Work on all copies of translations of the Material effected by or for Canada.
7. No restrictions other than those set out in this section must apply to Canada's use of the Material or of translated versions of the Material.”

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 the date of signature to July 29, 2019 inclusive.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Angela Quan
Procurement Specialist
Environment and Climate Change Canada
Assets, Contracting and Environmental Management Directorate
Workplace Services and Contracting Assets
105 McGill, 5e étage, Montréal QC H2Y 2E7
Angela.quan2@canada.ca
Telephone 514-283-0011

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:

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

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

Canada will make milestone payments in accordance with the milestone schedule detailed in the Contract and the payment provisions of the Contract if all work associated with the milestone and, as applicable; any deliverable required has been completed and accepted by Canada.

8 Invoicing Instructions

8.1 Milestone Payment

- (a) Canada will make milestone payments in accordance with the Deliverables table detailed in Annex A "Statement of Work" and the payment provisions of the Contract, up to 100 percent of the amount claimed and approved by Canada 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) the total amount for all milestone payments paid by Canada does not exceed _____ *(Insert percentage holdback)* percent of the total amount to be paid under the Contract;
- (iii) all such documents have been verified by Canada;
- (iv) all work associated with the milestone and as applicable any deliverable required

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) 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

Best Available Technologies / Best Environmental Practices To Reduce Greenhouse Gas Emissions From Oil Sands Extraction Facilities

BACKGROUND

On February 8, 2018, the Government of Canada proposed new legislation that would repeal and replace the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Through the proposed Impact Assessment Act, the Government is proposing new rules that protect the environment, recognize and respect Indigenous rights, and strengthen the economy. These new rules would involve a shift from environmental assessment to impact assessment. The new impact assessment process would serve as a planning tool that takes into consideration the whole range of environmental, health, social and economic effects of projects. This would include the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change.

The Government of Canada published *Discussion Paper: Developing a Strategic Assessment of Climate Change* where it outlined how it is considering integrating GHG-related best available technology and best environmental practice (BAT/BEP) requirements into the impact assessment process. BAT/BEP can be defined as the most effective technology, technique or practice economically achievable for reducing GHG emissions. BAT/BEP would encourage project proponents to consider managing GHG emissions from the preliminary design stage. Over the longer term, the implementation of BAT/BEP would provide a practical way to ensure that longstanding infrastructure projects emit lower levels of GHG emissions.

The scope of BAT/BEP analysis would be at the project level, i.e. the BAT/BEP analysis would consider GHG emissions from a project or facility as a whole. Project level includes construction, operation and decommissioning phases. This is in line with the boundaries of impact assessment and allows for high emission reductions, as facility-wide emission requirements would capture all emissions, including those from smaller sources that may otherwise not be required to use BAT/BEP. This approach also offers flexibility for proponents.

Environment and Climate Change Canada (ECCC) is currently gathering data and information on BAT/BEP related to stationary combustion equipment. As these equipment are used in many sectors, including oil sands, a separate contract on stationary combustion will ensure these equipment are treated similarly across sectors.

The proposed BAT/BEP approach is still in development. Any information provided in this Statement of Work is not and should not be interpreted as a policy decision.

OBJECTIVES

Environment and Climate Change Canada (ECCC) is seeking qualitative and quantitative data on the best available technologies and best environmental practices for reducing the direct GHG emissions from oil sands extraction facilities subject to a federal impact assessment.

WORK DESCRIPTION

The Contractor will carry out the following tasks:

Task 1: Overview of GHG emissions from oil sands extraction facilities

- The Contractor will conduct a review of public information sources on **GHG emission levels** and **GHG emission reduction technologies and practices** currently used in oil sands extraction facilities in Canada and internationally. The findings will be presented and organized by extraction methods in oil sands facilities (or a different format if agreed by the Departmental Representative), including oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP).
- In a draft report, the Contractor will provide a description of the oil sands extraction methods used in Canadian energy sector, and a **quantitative** overview of GHG emission levels and costs, as well as main variables driving GHG emission levels.
- The Contractor will use this work as a foundation for Task 2.

Deliverables related to Task 1:

1.1 Draft report chapter, in MS Word format: *Overview of GHG emissions from oil sands extraction facilities;*

1.2 Detailed outline of draft report chapters related to Task 2, in MS Word format, for review by the Departmental Representative.

Task 2: Best available technologies / best environmental practices

- Based on Task 1, the Contractor will provide:
 - A **qualitative** description of the best available technologies and best environmental practices for reducing GHG emissions from oil sands extraction facilities in Canada and internationally, considering all the phases of project life including construction, operation and decommissioning. Fuel switching and environmental practices, to the extent that they allow a user to achieve the output desired while minimizing GHG emissions, should also be considered.
 - A **quantitative** assessment of the GHG emission intensity associated with the best available technologies and best environmental practices for reducing GHG emissions from oil sands extraction facilities will be

provided.

- A **qualitative and/or quantitative** description of i) the associated costs; ii) the technical considerations, if any; and iii) the environmental considerations, if any, in the selection of a BAT/BEP. The Contractor will provide sufficient information and analysis for ECCC to understand the importance of these considerations and the scenarios where they could apply. The BAT/BEP, associated costs, technical and environmental considerations will be summarized in a table format.
- In a draft report, the Contractor will present and organize information by extraction methods in oil sands facilities (or a different format if agreed by the Departmental Representative), including oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP). Where relevant, the Contractor will provide a breakdown of quantitative figures by equipment, facility size, capacity and/or technology, as appropriate.
- In a draft report, the Contractor will also provide case studies (at least two for each oil sands extraction facility type) or as agreed with the Departmental Representative of the application of these best available technologies and best environmental practices along with the resulting emission intensity, where available.

Deliverables related to Task 2:

- 2.1 Draft report chapters for each facility type or as appropriate, in MS Word format: *Best available technologies/ best environmental practices* and summary table;
- 2.2 Draft report chapter highlighting case studies, in MS Word format.

Task 3: Emerging technologies and practices

- Building on Tasks 1 and 2, the Contractor will provide:
 - a **qualitative** description of emerging technologies and environmental practices for reducing GHG emissions from oil sands extraction facilities in Canada and internationally;
 - A description of i) the associated costs; the technical considerations, if any; and iii) environmental considerations, if any, in the selection of a BAT/BEP.
- The Contractor will provide the drivers and barriers for these emerging technologies, along with an estimated timeline for their wider commercialization.

- In a draft report, the Contractor will present and organize information by extraction methods in oil sands facilities (or a different format if agreed by the Departmental Representative), including oil sands mining and any of the following in-situ production techniques: steam assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), cold heavy oil production with sand (CHOPS), vapour extraction (VAPEX), toe to heel air injection (THAI) and electro thermal dynamic stripping process (ETDSP). Where relevant, the Contractor will provide a breakdown of quantitative figures by equipment, facility size, capacity and/or technology, as appropriate.

Deliverables related to Task 3:

3.1 Draft report chapter, in MS Word format: *Emerging technologies and practices.*

Task 4: Reporting

- The Contractor will combine the draft chapters into a draft final report, with relevant Appendices and a concluding chapter highlighting recommendations for future work. After addressing comments from the Departmental Representative, the Contractor will produce a final report.

Deliverables related to Task 4:

4.1 Draft report, in MS Word format.
 4.2 Final report, in MS Word format.
 4.3 All tables included in the written report, in MS Excel format.

Notes

- Completion of each task will be determined by the Departmental Representative with the deliverables being subject to the acceptance and/or approval of the Departmental Representative.
- This list of task elements is not necessarily exhaustive. The Contractor is encouraged and expected to provide any additional information discovered during the course of this work where this additional information would be deemed by the Departmental Representative to be relevant in fulfilling the purpose and objectives of this contract.
- Any monetary values included as part of the deliverables of the report (e.g. associated costs, if any, in the selection of BAT/BEP) shall be expressed by the Contractor in Canadian dollars, with the source year readily visible. Instances of currency conversion shall be identified by the Contractor and accompanied by the Contractor's explanation of the exchange rate used.
- ECCC reserves the right to have the collected data and the reports reviewed, in a confidential manner, by a third party expert and/or industry consultants. The

Contractor shall, where valid and reasonable, incorporate their recommendations, comments and views on all the deliverables.

- The Contractor is encouraged and expected to provide and present technical data in tables and graphs.
- The Contractor shall report all relevant sources of information.
- The Contractor shall prepare drafts and a final report that shall include, but not be limited to, the Tasks identified above. If a particular Task, or aspect thereof, cannot for any reason be fulfilled, then the Contractor must explain to the satisfaction of the Departmental Representative why this is so.
- All reports (either in draft or final form) shall be written in a clear and logical fashion and shall be submitted in a Microsoft Office format for Windows, version 2007 or later.
- All supporting and underlying data (raw data) shall be provided in Microsoft Excel format (version 2007 or later). Data must be properly organized, referenced and sourced. If estimates and assumptions are used, they must be clearly identified and justified. Spreadsheet design and documentation should enable modification and replication of results by the Departmental Representative.

DELIVERABLES AND SCHEDULE

The deliverables, reporting format and deadlines are outlined below in Table 1.

Table 1: Deliverables, Reporting Format, and Deadlines

	DELIVERABLE	REPORTING FORMAT	DEADLINES
Fiscal Year 2018-2019	Task 1: Overview of GHG emissions from oil sands extraction facilities		
	1.1 Draft report chapter: Overview of GHG emissions from oil sands extraction facilities	Word	January 25, 2019
	1.2 Detailed outline of draft report chapters related to Task 2	Word	January 25, 2019
	Task 2: Best available technologies / best environmental practices		
	2.1 Draft report chapters for each facility type or as appropriate: Best available technologies/ best environmental practices	Word	March 22, 2019
	2.2 Draft report chapter: Case studies	Word	March 22, 2019
Fiscal Year 2019-2020	Task 3: Emerging technologies and practices		
	3.1 Draft report chapter: Emerging technologies and practices	Word	April 19, 2019
	Task 4: Report		
	4.1 Complete draft report	Word	May 17, 2019
	4.2 Final report	Word	June 7, 2019
	4.3 All tables listed in the report	Excel	June 7, 2019

All deliverables must be provided in the required electronic format and submitted to the Departmental Representative. The Contractor will provide to the Departmental Representative electronic copies of all background documents (including reports, papers, notes, text, graphics, surveys, raw data, and spreadsheets) used for the delivery of this Contract.

STRUCTURE OF FINAL REPORT DELIVERABLES

The report will be written in a clear and logical fashion, complete with appendices as required, to address the issues and questions introduced in the Statement of Work, as well as any other items raised during discussions between the Contractor and the Departmental Representative. If a particular deliverable, or aspect thereof, cannot for any reason be fulfilled, an explanation, to the satisfaction of the Departmental Representative, is required. The Contractor may, subject to the approval of the Departmental Representative, change the suggested order of the final report from that implied by the Statement of Work.

Where appropriate and available, uncertainties will be identified, their sources explained and a range of high/low values or an appropriately justified data distribution will be provided. All the sources of information must be documented.

GENERAL INSTRUCTION FOR DELIVERABLES

Reports and correspondence generated by the Contractor during the course of this project shall be in English, be double-sided, using Microsoft Word, Microsoft Excel and Microsoft Power Point for Windows for presentations and other graphics.

Materials should be developed in a reader- and user-friendly format targeted toward an audience with a wide range of experience, education, and varying knowledge of the sector and its processes. It is recommended that an effective use of textual and visual (e.g., schematics) formats be incorporated within the report. Gaps in information and uncertainties (where they exist) shall be identified throughout the report if of importance.

ACCEPTANCE CRITERIA

All deliverables, and successful completion of the project, will be subject to approval by the Departmental Representative. If it is unsatisfactory, the contract will be cancelled moving forward.

COMMUNICATION

To assist with coordination of this project, the Contractor will communicate bi-weekly by email and/or by telephone with the Departmental Representative with updates on the project. The Contractor will describe briefly the status of each deliverables and any deviation from the work plan or the timelines in the proposal. Any changes to the schedule must be justified and accompanied with a solution that takes into account remaining timelines.

TRAVEL

There is no travel associated with this contract

LANGUAGE OF WORK

All deliverables must be submitted in English.

**ANNEX B
BASIS OF PAYMENT**

The contractor will be paid in accordance with the table below:

DELIVERABLE	Billing Date	Percentage / Amount
Task 1: Overview of GHG emissions from oil sands extraction facilities		
1.1 Draft report chapter: Overview of GHG emissions from oil sands extraction facilities	January 25, 2019	Approximately 20% of the total contract value
1.2 Detailed outline of draft report chapters related to Task 2	January 25, 2019	_____ \$
Task 2: Best available technologies / best environmental practices		
2.1 Draft report chapters for each facility type or as appropriate: Best available technologies/ best environmental practices (BAT/BEP)	March 22, 2019	Approximately 53% of the total contract value
2.2 Draft report chapter: Case studies	March 22, 2019	_____ \$
Task 3: Emerging technologies and practices		
3.1 Draft report chapter: Emerging technologies and practices	April 19, 2019	Approximately 12% of the total contract value
Task 4: Report		
4.1 Complete draft report	May 17, 2019	Approximately 15% of the total contract value
4.2 Final report	June 7, 2019	_____ \$
4.3 All tables listed in the report	June 7, 2019	
Grand Total		_____ \$

**ANNEX C
NON-DISCLOSURE CERTIFICATION**

I, _____, recognize that in the course of my work as an employee or subcontractor of _____, I may be given access to information by or on behalf of Canada in connection with the Work, pursuant to Contract Serial No. _____ between Her Majesty the Queen in right of Canada, represented by the Minister of Public Works and Government Services and _____, including any information that is confidential or proprietary to third parties, and information conceived, developed or produced by the Contractor as part of the Work. For the purposes of this agreement, information includes but not limited to: any documents, instructions, guidelines, data, material, advice or any other information whether received orally, in printed form, recorded electronically, or otherwise and whether or not labeled as proprietary or sensitive, that is disclosed to a person or that a person becomes aware of during the performance of the Contract.

I agree that I will not reproduce, copy, use, divulge, release or disclose, in whole or in part, in whatever way or form any information described above to any person other than a person employed by Canada on a need to know basis. I undertake to safeguard the same and take all necessary and appropriate measures, including those set out in any written or oral instructions issued by Canada, to prevent the disclosure of or access to such information in contravention of this agreement.

I also acknowledge that any information provided to the Contractor by or on behalf of Canada must be used solely for the purpose of the Contract and must remain the property of Canada or a third party, as the case may be.

I agree that the obligation of this agreement will survive the completion of the Contract Serial No.: _____

Signature

Date