



RETURN BIDS TO:

Canadian Nuclear Safety Commission (CNSC)

Send by email to: cncsolicitation-demandedesoumission.ccsn@canada.ca

Bid solicitation

Proposal to: Canadian Nuclear Safety Commission (CNSC)

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods and services listed herein and on any attached sheets at the price(s) set out thereof.

Instructions: See herein

Supplier name and address:

Issuing office: CNSC

THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

Buyandsell.gc.ca/tenders is the official site for the CNSC to meet its trade agreement obligations and the authoritative source for Government of Canada tenders.

Title: Development of Empirical Correlation Models for Hydrogen Production due to Steel Oxidation in CANDU Feeder and End-Fitting Materials. (R675.1)	
Solicitation no.: 5000053308	Date: September 28, 2020
Solicitation closes: At 2 p.m. / 14 h November 10, 2020	
Time zone: Eastern Standard Time (EDST)	
Address inquiries to: Luc Bonhomme	
Telephone: 613-293-0419	
Email: cncsolicitation-demandedesoumission.ccsn@canada.ca	
Destination: See herein	

Delivery required:	Delivery offered:
Supplier name and address:	
Telephone:	
Fax:	
Name and title of person authorized to sign on behalf of supplier (type or print):	
Signature	Date



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PART 1 - GENERAL INFORMATION

1.1 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 and Additional Information: includes the certifications and additional information to be provided;

Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and

Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment, and the Security Requirements Checklist.

1.2 Summary

1.2.1 The Canada Nuclear Safety Commission (CNSC) is looking for a scientific Contractor to perform experiments and develop empirical correlations that can be used to predict the rates of oxidation of CANDU feeders, end-fittings, and calandria vessel in a steam environment at temperatures representative of beyond design basis accident (BDBA)/severe accident conditions.

1.3 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 from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

A de-brief is intended to:

1. Provide the Bidder with feedback on their proposal and the solicitation process;
2. Review the evaluation of the Bidder's proposal and explain where they met or failed to meet the criteria;
3. Identify strengths and weaknesses in the Bidder's proposal to assist them with preparing future proposals.

A de-brief is not an opportunity for the Bidder to debate the evaluation or request a re-evaluation of the proposal.



PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<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](#) (2020-05-28) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation. The following changes are made:

a) With the exception of sections 1 and 3 of the 2003 (2020-05-28) Standard Instructions – Goods or Services – Competitive Requirements, all references to Public Works and Government Services (PWGSC) is deleted and replaced with the Canadian Nuclear Safety Commission (CNSC).

b) Revise subsection 2d of section 5, Submission of Bids, to read:

“send its bid only to the CNSC email address as specified on page 1 of the bid solicitation”.

c) Revise subsection 4 of section 5, Submission of Bids, as follows:

Delete: sixty (60) days

Insert: one hundred and eighty (180) days

d) Delete section 8, Transmission by Facsimile or by epost Connect, in its entirety.

e) Add the following paragraphs to section 18, Conflict of Interest – Unfair Advantage:

Conflict of Interest – Performance of the Work

- i. The CNSC reserves the right to review real, potential or apparent conflict(s) of interest. Bidders must disclose any of their activities related to the subject of the statement of work that are licensed by the CNSC. Bidders are also required to disclose any involvement in previous, current or planned work undertaken for a CNSC licensee that is or may be related to the subject of the statement of work. Such activities or work are not in themselves grounds for rejection; however, proposals to review previous work contributed by the bidder on behalf of a CNSC licensee, and proposals to make recommendations affecting the CNSC licensing decisions in which the bidder has a financial or non-financial interest may be rejected.
- ii. Bidders must address in detail, in their submitted bids, any real, potential or apparent conflict(s) of interest they may encounter while performing the work, and must substantiate which measures they are taking to prevent the conflict(s). If in doubt about a particular situation, bidders may contact the Contracting Authority before bid closing. The CNSC reserves the right to reject any bids in which a real, potential or apparent conflict of interest exists.

2.2 Submission of Bids

2.2.1 Bids must be submitted only to the CNSC by the date and time indicated on page 1 of the bid solicitation.

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



2.3 Former Public Servant

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 FPSs, 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.

Refer to Part 5 for Former Public Servant Certification.

2.4 Enquiries - Bid Solicitation

All inquiries must be submitted in writing to the contracting authority no later than the dates indicated in the table below. Inquiries received after that time may not be answered.

Question Period (QP)	Closing Date of QP	Estimated Response Date
QP-1	October 5, 2020	October 13, 2020
QP-2	October 20, 2020	October 27, 2020

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.

2.5 Applicable Laws

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

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



PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

The Bidder must submit its bid electronically by email. Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. Bidders should provide their bid in a single transmission, subject to a 15MB limitation.

The bid must be gathered per section and separated as follows:

- Section I: Technical Bid
- Section II: Financial Bid
- Section III: Certifications

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

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) letter format;
- (b) use a numbering system that corresponds to the bid solicitation.

Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Section II: Financial Bid

3.1.1 Bidders must submit their financial bid in accordance with the "Pricing Schedule in Attachment 1 of Part 3

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.



PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 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.

4.1.1 Technical Evaluation

Point rated technical evaluation criteria are included in Attachment 1 to Part 4 of this bid solicitation.

4.1.2 Financial Evaluation

- a) Refer to Attachment 1 to Part 3 of this bid solicitation.
- b) For bid evaluation and contractor(s) selection purposes only, the evaluated price of a bid will be determined in accordance with the Pricing Schedule detailed in Attachment 1 to Part 3 of this bid solicitation.
- c) The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

4.1.3 Maximum Funding

The maximum funding available for the Contract resulting from the bid solicitation is \$500,000.00, (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit the CNSC to pay the maximum funding available.

4.2 Basis of Selection

4.2.1 Basis of Selection – Highest Combined Rating of Technical and Price

- 1. To be declared responsive, a bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. meet the Maximum Funding requirement; and
 - c. obtain the required minimum of 70 % overall for the technical evaluation criteria which are subject to point rating.
The rating is on either 80 points or 85 points. Please see scoring grid in Attachment 1 of Part 4.
- 2. Bids not meeting (a) or (b) or (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 70 % for the technical merit and 30 % 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 70%.
- 5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30 %.



6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 70/30 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

Basis of selection – Highest combined rating technical merit (70%) and price (30%)

		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	$115/135 \times 70 = 59.63$	$89/135 \times 70 = 46.15$	$92/135 \times 70 = 47.70$
	Pricing score	$45/55 \times 30 = 24.54$	$45/50 \times 30 = 27.00$	$45/45 \times 30 = 30.00$
Combined rating		84.17	73.15	77.70
overall rating		1st	3rd	2nd



PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether 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 will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

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

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information 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 provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 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.

5.2.3 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

5.2.4 Former Public Servant

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 FPSs, 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 FPSs 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.



PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Requirements

1. There is no security requirement.



PART 7 - RESULTING CONTRACT CLAUSES

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

7.1 Statement of Work

The contractor must perform the work in accordance with the statement of work in Annex A.

7.2 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

7.2.1 General Conditions

2035 (2020-05-28) , General Conditions - Higher Complexity - Services, apply to and form part of the Contract.

a) Replace the text of section 34 with the following:

- i. The contractor acknowledges that individuals who are subject to the provisions of the *Conflict of Interest Act* (S.C. 2006, c. 9, s. 2) the *Conflict of Interest Code for Members of the House of Commons*, the *Values and Ethics Code for the Public Sector*, the *Treasury Board Policy on Conflict of Interest and Post-Employment*, the *CNSC Values and Ethics Code*, the *CNSC Conflict of Interest and Post-Employment Policy*, the *CNSC Directive on Reporting and Managing Financial Conflicts of Interest* and/or all other codes of conduct applicable within specific federal organizations cannot derive any direct benefit resulting from the contract.
- ii. Contractors, subcontractors, or any of their respective employees working full-time on CNSC premises must comply with the *Values and Ethics Code for the Public Sector*, the *Treasury Board Policy on Conflict of Interest and Post-Employment*, the *CNSC Values and Ethics Code*, the *CNSC Conflict of Interest and Post-Employment Policy* and the *CNSC Directive on Reporting and Managing Financial Conflicts of Interest*.
- iii. Post-employment procedures apply to individuals who have left the public sector.
- iv. The *CNSC Values and Ethics Code*, *CNSC Conflict of Interest and Post-Employment Policy* and the *CNSC Directive on Reporting and Managing Financial Conflicts of Interest* can be found at <http://www.nuclearsafety.gc.ca/eng/about-us/values-and-ethics/index.cfm>

7.2.2 Supplemental General Conditions

4006 (2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.

7.3 Security Requirements

There is no security requirement applicable to the Contract.



7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from date of the Contract award to _____, inclusive. [Fill in at contract award](#)

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Luc Bonhomme
Title: Contracting Specialist
Telephone: 613-293-0419
E-mail address: _____

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.

7.5.2 Project Authority

The Project Authority for the Contract is:

[Fill in at contract award](#)

Name: _____
Title: _____
Telephone: ____-____-_____
E-mail address: _____

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.3 Contractor's Representative

[Fill in at contract award](#)

Name: _____
Title: _____
Telephone: ____-____-_____
E-mail address: _____

7.6 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.

7.7 Payment

7.7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid an all-inclusive firm price as specified in Annex B. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.2 Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Annex B – Basis of Payment and the payment provisions of the Contract if:

- a. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.
- b. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

7.7.3 T1204 - Information reported by Contractor

7.7.3.1 Pursuant to paragraph 221 (1)(d) of the [Income Tax Act](#), R.S.C. 1985, c.1 (5th Supp.), payments made by departments and agencies to contractors under applicable services contracts (including contracts involving a mix of goods and services) must be reported on a T1204 Government Service Contract Payments slip.

7.7.3.2 To enable departments and agencies to comply with this requirement, the contractor must provide the following information prior to signature of the contract:

- a. the legal name of the contractor, i.e. the legal name associated with its business number or social insurance number (SIN), as well as its address and postal code;
- b. the status of the contractor, i.e. an individual, a sole proprietorship, a corporation, or a partnership;
- c. the business number of the contractor if the contractor is a corporation or a partnership and the SIN if the contractor is an individual or a sole proprietorship. In the case of a partnership, if the partnership does not have a business number, the partner who has signed the contract must provide its SIN;
- d. in the case of a joint venture, the business number of all parties to the joint venture who have a business number or their SIN if they do not have a business number.

7.7.3.3 The information must be sent to the contracting authority. If the information includes a SIN, the information should be provided in an envelope marked "Protected".

7.8 Invoicing Instructions

7.8.1 Invoices can be emailed to cnsc.financefinance.ccsn@canada.ca OR be mailed to the following address:

Canadian Nuclear Safety Commission
Finance Division
P.O. Box 1046, Station B
Ottawa, ON K1P 5S9
Canada



7.8.2 Original receipts are required for reimbursable travel expenses if these expenses are included in the basis of payment found in Annex B attached to this contract. The Contractor must identify the actual travel costs separately on any invoice issued pursuant to the Contract. Travel costs must be itemized by: airfare, train, car rental, personal vehicle, other transportation, accommodation, meals and other. Incidentals are not reimbursable.

7.8.3 The Contractor shall include the contract number and appropriate Applicable Taxes registration number on all invoices pertaining to the contract.

7.8.4 The last and final invoice under the contract shall be clearly marked "final invoice".

7.9 Certifications and Additional Information

7.9.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

7.9.2 Specific Persons

The Contractor must provide the services of the following person(s) to perform the Work as stated in the Contract: _____ (*insert name(s) of person(s) at time of contract award*).

7.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (*insert the name of the province or territory as specified by the Bidder in its bid, if applicable*).

7.11 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) the supplemental general conditions 4006 (2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information
- (c) the general conditions 2035 (2020-05-28)_Higher Complexity – Services;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) 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)*).

7.12 Intellectual Property

7.12.1

The general conditions are amended by deleting in its entirety the section entitled "Copyright", and replacing it with the following:



"Without affecting any existing intellectual property rights or relating to information or data supplied by Canada for purposes of the Contract, copyright in anything conceived, developed, or produced as part of the Work under the Contract will belong to the Contractor."

7.12.2

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.
2. 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 copyright in the Material, for any government purposes. Canada may use independent contractors in the exercise of Canada's license pursuant to this clause.
3. Copyright in any 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.
4. No restrictions other than those set out in this section must apply to Canada's use of copies of the Material or of translated versions of the Material.
5. At the request of Canada, the Contractor must provide to Canada, at the completion of the Work or at such other time as Canada may require, a written permanent waiver of moral rights, in a form acceptable to Canada, from every author that contributed to the Material. If the Contractor is an author of the Material, the Contractor permanently waives its moral rights in respect of the Material.

7.13 Foreign Nationals (Canadian Contractor)

The Contractor must comply with Canadian immigration requirements applicable to foreign nationals entering Canada to work temporarily in fulfillment of the Contract. If the Contractor wishes to hire a foreign national to work in Canada to fulfill the Contract, the Contractor should immediately contact the nearest Service Canada regional office to enquire about Citizenship and Immigration Canada's requirements to issue a temporary work permit to a foreign national. The Contractor is responsible for all costs incurred as a result of non-compliance with immigration requirements.

OR

7.13 Foreign Nationals (Foreign Contractor)

The Contractor must comply with Canadian immigration legislation applicable to foreign nationals entering Canada to work temporarily in fulfillment of the Contract. If the Contractor wishes to hire a foreign national to work in Canada to fulfill the Contract, the Contractor should immediately contact the nearest Canadian Embassy, Consulate or High Commission in the Contractor's country to obtain instructions, information on Citizenship and Immigration Canada's requirements and any required documents. The Contractor is responsible to ensure that foreign nationals have the required information, documents and authorizations before performing any work under the Contract in Canada. The Contractor is responsible for all costs incurred as a result of non-compliance with immigration requirements.

7.14 Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.



7.15 Third-Party Information

7.15.1 The contractor acknowledges that all third-party technical documents supplied for the purpose of this contract belong to the third party. The contractor shall return these technical documents to the originator upon completion of the contract.

7.15.2 The contractor acknowledges that proprietary third-party technical documents belong to the third party and shall be treated as confidential. No physical copies or digital records of technical documents shall be retained by the contractor after completion of the contract.

7.15.3 Upon completion of the contract, the contractor shall immediately return all proprietary technical documents to the originator, and shall provide the CNSC with a certificate of a senior officer of the contractor certifying such return and that no copies of proprietary technical documents, or any part thereof, in any form remain in the possession or control of the contractor.

7.16 Government Site Regulations

The Contractor must comply with all regulations, instructions and directives in force on the site where the Work is performed.



ANNEX "A" - STATEMENT OF WORK

1.0 TITLE

Development of Empirical Correlation Models for Hydrogen Production due to Steel Oxidation in CANDU Feeder and End-Fitting Materials.

2.0 OBJECTIVE OF THE CONTRACT

The objective of this project is to perform experiments and develop empirical correlations that can be used to predict the rates of oxidation of CANDU feeders, end-fittings, and calandria vessel in a steam environment at temperatures representative of BDBA/severe accident conditions.

3.0 BACKGROUND

During a beyond design basis accident (BDBA) including a severe accident, metallic surfaces in the reactor can be exposed to high-temperature steam. Oxidation of metals can liberate significant quantities of hydrogen or deuterium gas, which is highly flammable. The uncontrolled combustion can potentially lead to significant challenges to the containment integrity of a nuclear power plant.

Currently, models for hydrogen production from zirconium components (fuel bundle sheath and pressure tube) are included in design-basis-accident analysis computer codes such as CATHENA. The severe accident code MAAP-CANDU models the oxidation of all zirconium materials in the core as well as the stainless steel surfaces of the calandria vessel. Oxidation of other steel components, such as the carbon steel feeder pipes and stainless steel end-fitting assemblies, is not modelled in either computer code. Carbon steels are in general more oxidizable compared to stainless steels. While the oxidation kinetics of steel is well known, the oxidation characteristics of specific carbon steel used in CANDU reactor components and its impact on the overall amount of hydrogen production relative to zirconium oxidation is not firmly established.

The Canadian Nuclear Safety Commission (CNSC) has received interventions that have increased CNSC's interest in exploring the possibility to refine models for the hydrogen production from steel oxidation in CANDU reactor components.

It is expected that the experimentally-derived models for the determination of the high-temperature oxidation rates of CANDU feeders, end-fittings, and calandria vessel under relevant conditions would enable analysts to better estimate the contribution of hydrogen generation from steel oxidation during a BDBA/severe accident.

4.0 SCOPE OF WORK

The scope of work consists of activities needed for development of empirical models that can be used to predict the rates of oxidation of the steel components in CANDU reactors. This includes:

- Establish the technical basis and identify any available correlations to aid in the development of a work plan and methodology for proposed experiments.
- Obtaining of vital experimental data on high-temperature oxidation kinetics for specific steel materials used in CANDU reactors.
- Developing models or correlations that can be used to predict the oxidation rates of CANDU feeders, end-fittings, and the calandria vessel.



5.0 TASKS

- 5.1 Prepare a work plan including the methodology for the study of hydrogen production from oxidation of stainless steel and carbon steel in a CANDU reactor during a BDBA/severe accident.
- 5.2 Establish the technical basis based on the existing survey of literature.
- 5.3 Perform high-temperature oxidation kinetics experiments based on the work plan and methodology outlined in 5.1.
- 5.4 Analyse results from 5.2, develop and/or propose empirical models for the prediction of the rates of oxidation of CANDU feeders, end-fittings, and calandria vessel under relevant BDBA/severe accident conditions.
- 5.5 Prepare Initial Finding Report and Formal Progress Reports, if required
- 5.6 Prepare a final report based on the scope (Section 4.0) and tasks identified (5.1-5.3).
- 5.7 Present the project findings, conclusions and recommendations to documented in the Draft Report to CNSC staff either at CNSC Headquarters or virtually.
- 5.8 Prepare Abstract, conveying the essential information of the Final Report

6.0 DELIVERABLES and ASSOCIATED SCHEDULE

6.1 Start-up Meeting

Date: Within two weeks of contract award

Location: The CNSC Head Office, Ottawa OR via Tele/Videoconference

Purpose: To discuss and clarify the proposed approach, work plan and schedule to ensure achievement of the contract objectives. The contractor shall make a presentation with the above purpose in mind.

6.2 Monthly Progress Updates via email

Purpose: To assess the degree to which the agreed project objectives are being achieved as planned and thus to facilitate timely adjustments (if necessary) to ensure the project success.

6.3 Formal Progress Meetings

Dates: Every 3 months after contract award

Location(s): The CNSC Head Office, Ottawa OR Via Tele/Videoconference OR Contractor Location

Purpose: To assess the degree to which the agreed project objectives are being achieved as planned and thus to facilitate timely adjustments (if necessary) to ensure the project success.

6.4 First Formal Progress Report

Due Date: 6 months after contract award

Copies: One electronic copy via email to the Project Authority

Format and style requirements: To be specified by the Project Authority. The font Times New Roman 12 is to be used.



6.5 Initial Findings Report

Due Date: 12 months after contract award.

Copies: One electronic copy via email to the Project Authority

Format and style requirements: To be specified by the Project Authority. The font Times New Roman 12 is to be used.

6.6 Second Formal Progress Report

Due Date: 18 months after Initial Findings report.

Copies: One electronic copy via email to the Project Authority

Format and style requirements: To be specified by the Project Authority. The font Times New Roman 12 is to be used.

6.7 Draft Final Report

Due Date: 23 months after contract award

Copies: One electronic copy via email to the Project Authority

6.8 Presentation

Due Date: 23 months after contract award

Location: The CNSC Head Office, Ottawa

Purpose: To present the project findings, conclusions and recommendations documented in the Draft Report.

6.9 Final Report

Due Date: 24 months after contract award

Copies: Two electronic copies via email (word document and PDF version) to the Project Authority.

6.10 Abstract

Due Date: 24 months after contract award

Copies: Two electronic copies via email (word document and PDF version) to the Project Authority.

Format and style requirements: 300 words or less providing a stand-alone statement that conveys the essential information of the Final Report. The abstract shall include the following: a) context; b) purpose/objective of the research; c) approach/scope/method/findings. The abstract should be written in a style that can be understood by the general public. The CNSC reserves the right to modify or translate the Abstract into French or English.



7.0 FORMAT OF DELIVERABLES

The contractor must provide the deliverables in the following formats:

- electronic
- using font Times New Roman 12
- MS Office 2010 or later (Word, Project, PowerPoint, Excel, Visio)
- PDF format

Any electronic files that cannot be read or require major formatting changes when opened are not acceptable and will be returned to the contractor for correction at their expense.

The CNSC reserves the right to distribute the final report publicly at its discretion. CNSC publication number(s) will be provided by the CNSC.

8.0 LANGUAGE OF WORK

The work will be conducted in English. The contractor must submit all deliverables in English.

9.0 TRAVEL REQUIREMENTS

The contractor must give their final presentation at the CNSC head office in Ottawa, ON. Travel may be required from the contractor's location to Ottawa, ON. Travel costs will be included as part of the fixed price value of the contract.

10.0 LOCATION OF WORK

The contractor must complete all work at the contractor's location. The contractor may be required to attend meetings at CNSC headquarters or other CNSC locations within the National Capital Region.



ANNEX B – BASIS OF PAYMENT

1.0 Basis of Payment – All-inclusive Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid an all-inclusive firm price of \$_____, and will be paid in accordance with the Milestone Schedule, below. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

2.0 Milestones Schedule

Milestone	Due Date	Firm Price for Milestone
Deliverable 6.4 - First Formal Progress Report	<i>Fill at Contract award</i>	\$ (Approximately 20% of total)
Deliverable 6.5 - Initial Findings Report		\$ (Approximately 20% of total)
Deliverable 6.6 - Second Formal Progress Report		\$ (Approximately 20% of total)
Deliverable 6.7 – Draft Report		\$ (Approximately 20% of total)
Deliverable 6.9 & 6.10 – Final Report & Abstract		\$ (Approximately 20% of total)

3.0 Travel and Living Expenses

CNSC will not reimburse any travel and living expenses.



ATTACHMENT 1 to PART 3 OF THE BID SOLICITATION

Pricing Schedule

1. The Bidder must complete this pricing schedule and include it in its Financial Bid.
2. Any estimated level of services specified in this pricing schedule is provided for bid evaluated price determination purposes only. It is only an approximation of the requirements and is not to be considered as a contract guarantee. Levels of efforts are provided as estimates only, and must not be construed as a commitment by CNSC to respect those estimated in any resulting contract.

**A. Firm All-Inclusive Price for the work outlined
in Annex A – Statement of Work (Evaluated Price):**

\$ _____



ATTACHMENT 1 to PART 4 OF THE BID SOLICITATION

Technical Evaluation

Evaluation Disclaimer

The Technical Evaluation of the proposals will be performed as follows:

Point Rated Technical Criteria

The Bidder must obtain the required minimum number of points specified for the point rated technical criteria. As this evaluation grid has a flexible score, please the calculation grid below for minimum points

In their curriculum vitae, each resource should indicate:

- a. A list of current and past employers, indicating the supervisor's name and contact information
- b. The resource's primary language (mother tongue)

For each of the point rated requirements listed below, the Bidder **must demonstrate** experience by using project descriptions as executed by the proposed resources, where applicable. The project description should include the following:

- a. Project Title
- b. Description of project
- c. List of tasks performed by the resource
- d. Start and end date of project (if end date applies) (dates must include month and year)
- e. Start and end date when the resource actually worked in this capacity on this project (dates must include month and year)
- f. The Bidder must provide concrete and detailed examples to clearly demonstrate how the experience requirements were met, merely stating you have the experience will not qualify;
- g. Reference contact information that includes name and email. The reference must be a person who was either the Project or Technical Authority, or the supervisor or employer of the resource, if an employee.

Indicate the location in your proposal where the requested information can be found for both the mandatory and point rated requirements.

Merely stating the experience is not sufficient and the proposal will be deemed non-compliant.

Example: If the point rated criteria demands experience in gathering, analyzing and validating findings, it is not sufficient just to state the resource has experience gathering, analyzing and validating findings. The experience must be demonstrated and a reference made to the specific location in the resume where corroborating information can be located in the manner indicated above.

The Contracting Authority reserves the right to request reference(s) from any of the listed projects to verify and validate the information stated in the bid. If the reference is unable to verify or validate the information stated in the proposal, the bid will be deemed non-compliant.



Definitions

A. Experience Time Frame

All experiences time-frames provided for evaluation is experience gained by bid closing date. Any experience described after bid is closed will not count towards experience.

	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	ASSIGNED MARK	RATIONAL/JUSTIFICATION FOR MARK
R1	<p>Proposed approach and methodology</p> <p>The Bidder should provide two (2) relevant project descriptions to demonstrate experience successfully executing projects. The Bidder's response should include the following elements for each project example:</p> <ul style="list-style-type: none"> a) the scope of the project b) the approach and methodology applied to complete the work c) challenges or issues encountered while completing the project and the solutions to mitigate them d) outcomes of the project and level of success achieved 	40	<p>0 Point – one or more of the elements a) to d) was not addressed</p> <p>8 Points - all four element from (a) to (d) are addressed; standard approach/methodology applied with an adequate level of success achieved</p> <p>12 Points - all four element from (a) to (d) are addressed; standard approach/methodology applied with a high level of success achieved</p> <p>16 Points - all four element from (a) to (d) are addressed; novel benchmarking approach/methodology applied with an adequate level of success achieved</p> <p>20 Points - all four element from (a) to (d) are addressed; novel benchmarking approach/methodology applied with a high level of success achieved</p> <p>A maximum of 20 points will be awarded per project example.</p> <hr/>		



	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	ASSIGNED MARK	RATIONAL/JUSTIFICATION FOR MARK
R2	<p>Recognition of problems and solutions proposed</p> <p>Based on its experience with projects with similar scope, the Bidder should identify potential or anticipated problems and/or difficulties that could affect the outcome of the work described in the Statement of Work and suggest how these will be addressed and resolved.</p>	10	<p>0 Points - fails to identify any potential issues 1 Points - 1 potential issue identified 2 Points - 2 potential issues identified 3 Points - 3 potential issues identified 4 Points - 4 potential issues identified 5 Points - 5 or more potential issues identified</p> <p>Proposed solutions to mitigate above identified issues:</p> <p>1 point to propose a solution to mitigate the issues for each of the above identified major issues. Maximum of 5 points</p> <p>Additional score if less than 5 major issues can be identified:</p> <p>If the Bidder can <u>fully demonstrate</u> no other major issues beyond those identified above is possible:</p> <p>X point(s) = (5-(# points for identified major problems))x2</p>		
A	Total Score R1 & R2	/50	Report this score to calculation grid below		



	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	ASSIGNED MARK	RATIONAL/JUSTIFICATION FOR MARK
<p>The following point rated criteria are resource and team specific. The Bidder will select the size of its team, and <u>must</u> identify the Project Manager/Team Leader and each member of the team, if more than one resource is proposed. If only one resource is proposed, that resource will be deemed the Project Manager.</p>					
<p>R3</p>	<p>Proposed team organization, including availability of team members, reporting structure, and capability to carry out the project</p> <p>The Bidder should include a description of the team, the reporting structure, major subcontractors as applicable, as well as the competence, previous experience and ability of the proposed team to complete the work.</p> <p><u>A team is defined as two or more members. In the event the Bidder proposes only one resource, R3 will not be evaluated.</u></p>	<p>5</p> <p>Or</p> <p>N/A</p>	<p>0 Points - not addressed in proposal 1 Point - reporting structure not defined 2 Points - defined reporting structure; proposed team have no apparent experience working together 3 Points - well defined reporting structure; 50% of the proposed team have prior experience working together (up to 2 projects) 5 Points - well defined reporting structure; 75% of the proposed team have prior experience working together (more than 2 projects)</p>		
<p>B</p>	<p>Total for R3, if applicable</p>	<p>/5 or N/A</p>	<p>Report this score to calculation grid below</p>		



	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	ASSIGNED MARK	RATIONAL/JUSTIFICATION FOR MARK
Name of Project Manager:					
R4	<p>Qualifications and relevant experience of the project manager including position within the organization:</p> <p>The Bidder should identify whom the Project Manager assigned to this requirement will be. The Bidder should describe the Project Manager's position within the organization, as well as their experience, education, and qualifications. His/her curriculum vitae should also be included.</p>	10	<p><u>Experience</u> 0 Points - the project manager has experience managing 1 or fewer projects 2 Point - project manager has experience managing 2 to 4 projects 5 Points - project manager has experience managing 5 or more projects</p> <p><u>Education</u> 0 Points - no formal project management training 1/2 Point - formal project management training 1 Point - PMP certification</p> <p><u>Position</u> 0 Points - not addressed 1 Point - no authority to (re)direct resources 3 Points - authority to (re)direct resources</p> <p><u>Other</u> 1 Point - project management experience in related/relevant nuclear area in at least one project</p>		
C	Total for R4	/5	Report this score to calculation grid below		



The Bidder must complete one grid of point rated criteria 5.1 to 5.3 for each resource proposed, including the Project Manager. In the event that more than one resource is proposed, the total score for criteria 5.1 to 5.3 will be the average of all resources proposed.

Resource #1: Project Manager

R5.1	The Bidder should demonstrate experience of the proposed resource in developing empirical correlation models in safety analysis computer codes.	7	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience</p>			
R5.2	The Bidder should demonstrate knowledge and experience of the proposed resource in experimental, numerical, theoretical and sensitivity analyses of critical parameters that can be used for models in computer codes for safety analysis.	7	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience</p>			
R5.3	The Bidder should demonstrate knowledge of the proposed resource of CANDU reactor containment and hydrogen production associated with steel oxidation in CANDU feeder and end-fitting materials.	6	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - from 2 years to less than 4 years of demonstrated experience 4 Points - from 4 years to less than 10 years of demonstrated experience 6 Points - 10 years or more of demonstrated experience</p>			
D1	Resource # 1: Project Manager's Score				/20	Report this score to the average resource score calculation grid below



Resource #2's Name:						
R5.1	The Bidder should demonstrate experience of the proposed resource in developing empirical correlation models in safety analysis computer codes.	7	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience			
R5.2	The Bidder should demonstrate knowledge and experience of the proposed resource in experimental, numerical, theoretical and sensitivity analyses of critical parameters that can be used for models in computer codes for safety analysis.	7	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience			
R5.3	The Bidder should demonstrate knowledge of the proposed resource of CANDU reactor containment and hydrogen production associated with steel oxidation in CANDU feeder and end-fitting materials.	6	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - from 2 years to less than 4 years of demonstrated experience 4 Points - from 4 years to less than 10 years of demonstrated experience 6 Points - 10 years or more of demonstrated experience			
D2	Resource #2 Score				/20	Report this score to the average resource score calculation grid below



Resource #3's Name:						
R5.1	The Bidder should demonstrate experience of the proposed resource in developing empirical correlation models in safety analysis computer codes.	7	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience			
R5.2	The Bidder should demonstrate knowledge and experience of the proposed resource in experimental, numerical, theoretical and sensitivity analyses of critical parameters that can be used for models in computer codes for safety analysis.	7	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience			
R5.3	The Bidder should demonstrate knowledge of the proposed resource of CANDU reactor containment and hydrogen production associated with steel oxidation in CANDU feeder and end-fitting materials.	6	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - from 2 years to less than 4 years of demonstrated experience 4 Points - from 4 years to less than 10 years of demonstrated experience 6 Points - 10 years or more of demonstrated experience			
D3	Resource #3 Score				/20	Report this score to the average resource score calculation grid below



Note to the Bidder: Copy and paste the grid x below for each proposed resource above 3.

Resource #x's Name:

R5.1	The Bidder should demonstrate experience of the proposed resource in developing empirical correlation models in safety analysis computer codes.	7	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience</p>			
R5.2	The Bidder should demonstrate knowledge and experience of the proposed resource in experimental, numerical, theoretical and sensitivity analyses of critical parameters that can be used for models in computer codes for safety analysis.	7	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 3 Points - from 2 years to less than 4 years of demonstrated experience 5 Points - from 4 years to less than 10 years of demonstrated experience 7 Points - 10 years or more of demonstrated experience</p>			
R5.3	The Bidder should demonstrate knowledge of the proposed resource of CANDU reactor containment and hydrogen production associated with steel oxidation in CANDU feeder and end-fitting materials.	6	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - from 2 years to less than 4 years of demonstrated experience 4 Points - from 4 years to less than 10 years of demonstrated experience 6 Points - 10 years or more of demonstrated experience</p>			
Dx	Resource #x Score			/20	Report this score to the average resource score calculation grid below	



Calculation Grid for the Point Rated Criteria				
Row #	Description	Score		
A	Total R1 and R2	/50		
B	Score for R3 (indicate if not applicable*)	/5 or N/A*		
C	Score for R4	/10		
D	Average score for R5.1 to R5.3	/20	**See below for average calculations	
E	Total Point Rated A+B+C+D	/85	Minimum Score 59/85	Calculate /1360 (x16) for Bid Selection Purposes
E*	Total Point Rated A+C+D (if B is N/A)	/80	Minimum Score 56/80	Calculate /1360 (x17) for Bid Selection Purposes
**Calculation of Average Score for R5.1 to R5.3 (Row D for each resource)				
D1	Proposed Resource 1: Project Manager	/20		
D2	Proposed Resource 2	/20		
D3	Proposed Resource 3	/20		
Dx	Proposed Resource x	/20		
Dx	Proposed Resource x	/20		
Dx	Proposed Resource x	/20		
DTotal	Total Score for All Resources	/	(/20 (x # of resources))	
DAverage	Average Score of All Resources	/20	Total Score All Resources / # of resources: Transfer Average Score to Row D above	