



RETURN BIDS TO:

Canadian Nuclear Safety Commission (CNSC)

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REQUEST FOR PROPOSAL

Proposal to: Canadian Nuclear Safety Commission (CNSC)

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Instructions: See herein

Issuing office:

Canadian Nuclear Safety Commission
280 Slater St.
Ottawa, Ontario
Canada K1P 5S9

Title: R707.1. Review of the Basis for Establishing Probabilistic Fracture Mechanics (PFM) Acceptance Criteria	
Solicitation no.: 87055-18-0452/A	Date: July 30, 2019
File No. – N° de dossier: 5000045295	
Solicitation closes: At 2:00 pm, Wednesday September 4th, 2019	Time zone: Eastern Daylight Time (EDT)
Address inquiries to:	
Telephone:	Fax:
Email: cpsc.solicitation-demandedesoumission.ccsn@canada.ca	
Destination: See herein	

Delivery required: (See Herein)	Delivery offered:
Supplier name and address:	
Telephone:	
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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

It is understood that the procurement of services for the Canadian Nuclear Safety Commission (CNSC) falls under the provisions of the *Nuclear Safety and Control Act*, S.C. 1997, c. 9.

1.1 INTRODUCTION

This bid solicitation is divided into six parts plus attachments and annexes, as follows:

Part 1 General Information: provides a general description of the requirement;

Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;

Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;

Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, if applicable, and the basis of selection;

Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;

Part 6 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract;

The Attachments include:

List of Attachments to Part 3 (Bid Preparation Instructions):

[Attachment 1 to Part 3: Pricing Schedule](#)

List of Attachments to Part 4 (Evaluation Procedures and Basis of Selection):

[Attachment 1 to Part 4: Bid Evaluation Criteria](#)

The Annexes include:

[ANNEX A - STATEMENT OF WORK](#)

[ANNEX B - BASIS OF PAYMENT](#)

1.2 SUMMARY

1.2.1 The Canadian Nuclear Safety Commission (CNSC) is seeking bids from qualified suppliers to supply professional services in order to review publically available documentation, and provide recommendations on the Basis for Establishing Probabilistic Fracture Mechanics Acceptance Criteria.

A complete description of the work to be performed is provided in Annex A – Statement of Work

It is intended to result in the award of one (1) contract for a period of one year commencing on the date of contract award.

Interested bidders are required to submit their proposals in accordance with the instructions provided in this RFP.

Bids can be submitted in both official languages of Canada.

1.2.2 The resulting Contract is not to be used for deliveries within a Comprehensive Land Claims Settlement Area (CLCSA). All requirements for delivery within a CLCSA are to be processed individually.



1.3 DEBRIEFINGS

After contract award, 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 provided 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

2.1.1 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](#) issued by Public Works and Government Services Canada (PWGSC).

2.1.2 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(s).

2.1.3 The [2003 \(2019-03-04\) Standard Instructions – Goods or Services – Competitive Requirements](#) are incorporated by reference into and form part of the bid solicitation, with the following modifications:

- delete section 02 in its entirety;
- in section 03, delete “Pursuant to the Department of Public Works and Government Services Act (S.C. 1996, c.16),”
- delete subsection 2d of section 5, Submission of Bids in its entirety;
- revise subsection 4 of section 05, Submission of Bids, as follows:

Delete: “Bids will remain open for acceptance for a period of not less than 60 days from the closing date of the bid solicitation,”

And replace with: “Bids will remain open for acceptance for a period of not less than 180 days from the closing date of the bid solicitation”.

- in sections 06 and 07
Delete: “PWGSC”
Replace with: “CNSC”
- delete section 8, Transmission by Facsimile or by epost Connect, in its entirety.
- delete subsections 1a and 1b of section 12, Rejection of Bid, and replace with:

a) Bidders are advised that the CNSC reserves the right to consider, as part of its evaluation, any unsatisfactory performance in a previous or current project performed by the bidder, proposed subcontractor or individual proposed resource either on contract or under previous CNSC employment.

b) Additionally, bidders shall take note that once awarded, the performance of the contractor during and upon completion of the work shall be evaluated by the CNSC. The evaluation may include all or some of the following criteria: quality of deliverables, timeliness of completion of the work, project management, contract management, and cost. Should the contractor's performance be considered unsatisfactory, the contractor may be declared ineligible for future CNSC contracts.

- add the following paragraphs to section 18, Conflict of Interest – Unfair Advantage:

Conflict of Interest – Performance of the Work

- a. 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.

- b. 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.

- Delete subsection 2 of section 20, Further Information, in its entirety.

2.1.4 With the exception of sections 1 and 21 of the 2003 (2019-03-04) Standard Instructions – Goods or Services – Competitive Requirements, all references to "Canada", "Crown", "Her Majesty", "the Government" or "the Minister" means or is replaced by the Canadian Nuclear Safety Commission and its presiding Minister as appropriate.

2.1.5 Wherever there is a discrepancy between information in this request for proposal and the provisions of the 2003 (2019-03-04) Standard Instructions, the information in this request for proposal document shall supersede the information of the 2003 (2019-03-04) Standard Instructions.

2.2 SUBMISSION OF BIDS

- a. Bids must be submitted only to CNSC e-mail address: cncsolicitation-demandedesoumission.ccsn@canada.ca, by the date and time indicated on page 1 of the bid solicitation.
- b. Canada will not be responsible for late bids received at destination after the closing date and time, even if it was submitted before.
- c. Given that bids will be received by email, a confirmation of receipt of bid will be sent to the Bidder by the CNSC. CNSC is limited to individual emails of a maximum size of 15 MBs.
- d. Due to the nature of the bid solicitation, bids transmitted by facsimile to CNSC will not be accepted.

2.3 FORMER PUBLIC SERVANT

See [Part 5 – Certifications](#), for certification required with the bid and section [6.6 of Part 6 – Resulting Contract Clauses](#).

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 required information 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.

2.4 ENQUIRIES – BID SOLICITATION

- 2.4.1 All inquiries must be submitted in writing to the contracting authority no later than **five (5) calendar days** before the bid closing date. Inquiries received after that time may not be answered.
- 2.4.2 Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the inquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable the CNSC to provide an accurate answer. Technical inquiries 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 the CNSC determines that the inquiry is not of a proprietary nature. The CNSC may edit the questions or may request that the bidder do so, so that the proprietary nature of the question is eliminated, and the inquiry can be answered with copies to all bidders. Inquiries not submitted in a form that can be distributed to all bidders may not be answered by the CNSC.



2.5 APPLICABLE LAWS

- 2.5.1 Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the **Province of Ontario**.
- 2.5.2 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.

2.6 MAXIMUM FUNDING

The overall maximum funding available for a contract resulting from the bid solicitation is **\$60,000** (Canadian dollars, Applicable Taxes extra). The estimated maximum funding breakdown (in Canadian dollars, excluding applicable taxes) per government fiscal year (April 1–March 31) should be as follows:

Fiscal year 2019–20: \$ 30,000

Fiscal year 2020–21: \$ 30,000

Bids that exceed the overall maximum funding will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available.”



PART 3 – BID PREPARATION INSTRUCTIONS

3.1 BID PREPARATION INSTRUCTIONS

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

- i. Section I: Technical Bid (1 email copy)
- ii. Section II: Financial Bid (1 email copy)
- iii. Section III: Certifications (1 email copy)
- iv. Section IV: Additional Information (1 email copy)

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

NB: Please note that CNSC is limited to individual emails of a maximum size of 15 MBs.

3.1.2 **Format for Bid:** Canada requests that bidders follow the format instructions described below in the preparation of their bid :

- i. use a numbering system that corresponds to the bid solicitation;
- ii. include a title page at the front of each volume of the bid that includes the title, date, bid solicitation number, bidder's name and address and contact information of its representative; and
- iii. Include a table of contents.
- iv. Soft copies will be accepted in any of the following electronic formats:
 - Portable Document Format .pdf
 - Microsoft Word 97/2000 (.doc)
 - Microsoft Excel 97/2000 (.xls)

3.2 SECTION I: TECHNICAL BID

3.2.1 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 in a thorough, concise and clear manner for carrying out the work.

3.2.2 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.

3.2.3 [Part 4, Evaluation Procedures](#), contains additional instructions that bidders should consider when preparing their technical bid.

3.3 SECTION II: FINANCIAL BID

A. Bidders must submit their financial bid in Canadian funds and in accordance with the pricing schedule detailed in [Attachment 1 to Part 3](#). The total amount of Applicable Taxes must be shown separately.

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



- C. When preparing their financial bid, Bidders should review clause [2.6 MAXIMUM FUNDING](#) (it is recommended that bidders comply with the suggested per fiscal year funding), of Part 2, [clause 4.1.2, Financial Evaluation, of Part 4](#) of the bid solicitation; and [article 6.7, Payment, of Part 6](#) of the bid solicitation.

D. Price Breakdown

In their financial bids, bidders are requested to provide the following details for each firm lot price quoted in response to the pricing schedule detailed in [Attachment 1 to Part 3](#), as applicable:

1. Estimated Cost of Professional Fees

For each individual, Bidders must provide: a) the estimated cost of professional fees; and b) the cost basis (comprised of the quoted all-inclusive fixed hourly rate; and the estimated corresponding number of working hours. Bidders must specify the number of hours included in a working day, exclusive of meal breaks.

The quoted all-inclusive fixed time rate must include the total estimated cost of any local travel and living expenses that may need to be incurred for the Work described in Annex A – Statement of Work.

2. Estimated Cost of Incidental Goods

Bidders must: 1) identify each incidental good to be purchased; and 2) provide the estimated cost and the cost basis for each one.

3. Estimated Cost of Materials and Supplies

Bidders must: 1) identify each category of materials and supplies to be purchased; and 2) provide for each one, the estimated cost and the cost basis. Materials and supplies are items which will be consumed during the performance of any resulting contract.

4. Each trip -Travel Plan and Estimated Cost of Travel and Living Expenses

For each individual required to travel to do, deliver or perform the Work described in Part 7 of the bid solicitation, Bidders must provide for each trip: 1) the travel plan; and 2) the estimated cost of travel and living expenses not included in the professional fees (D.1 above), established in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the [National Joint Council Travel Directive](#); and with the other provisions of the directive referring to "travelers", rather than those referring to "employees".

5. Estimated Cost of Subcontracts

Bidders must: 1) identify any proposed subcontractors; and 2) provide a price breakdown submitted in accordance with paragraph D of this section of Part 3 of the bid solicitation for each one.

6. Estimated Cost of Other Direct Charges

Bidders must: 1) identify the categories of other direct charges anticipated (such as long distance communications and rental); and 2) provide the estimated cost and the cost basis for each one.

7. Applicable Taxes

The price breakdown must not include the Applicable Taxes.

E. SACC Manual Clauses

[C3011T \(2013-11-06\) Exchange Rate Fluctuation](#)

3.4 SECTION III: CERTIFICATIONS

Bidders must submit the certifications required under [Part 5](#) of this bid solicitation.



3.5 SECTION IV: ADDITIONAL INFORMATION

In Section IV of their bid, bidders should provide:

1. their legal name;
2. the name of the contact person (provide also 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;



ATTACHMENT 1 TO PART 3 – PRICING SCHEDULE

The Bidder must complete this pricing schedule and include it in its financial bid.

<p>Total Firm Bid Price (Canadian dollars, with Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included)*:</p> <p>* This amount will be used as the bid evaluated price as per 4.2.1 Basis of Selection – Highest Combined Rating of Technical Merit (60%) and Price (40 %). Cannot exceed overall maximum funding as specified in clause 2.6 MAXIMUM FUNDING .</p>	<p>\$ _____</p>
<p style="text-align: right;"><i>Total Estimated Applicable Taxes:</i></p>	<p>\$ _____</p>



PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 EVALUATION PROCEDURES

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

An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

a) **Mandatory technical criteria**

Refer to [Attachment 1 to Part 4](#) of this bid solicitation.

b) **Point-Rated technical criteria**

Refer to [Attachment 1 to Part 4](#) of this bid solicitation. Point-rated technical criteria not addressed in the bid will be given a score of zero.

4.1.2 Financial Evaluation

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.

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

4.2 BASIS OF SELECTION

4.2.1 Basis of Selection – Highest Combined Rating of Technical Merit (60%) and Price (40 %)

4.2.1.1 To be declared responsive, a bid must:

(a) comply with all the requirements of the bid solicitation;

(b) meet all the mandatory evaluation criteria; and

(c) obtain the required minimum number/percent of points for the technical evaluation criteria which are subject to point rating.

4.2.1.2 Bids not meeting 4.2.1.1 (a) or (b) or (c) will be declared non-responsive. Neither the responsive bid obtaining the highest number of points nor the one with the lowest evaluated price will necessarily be accepted.

4.2.1.3 The lowest evaluated price (LP) of all responsive bids will be identified and a pricing score (PS), determined as follows, will be allocated to each responsive bid (i): $PS_i = LP / P_i \times 40$. P_i is the evaluated price (P) of each responsive bid (i).

4.2.1.4 A technical merit score (TMS), determined as follows, will be allocated to each responsive bid (i): $TMS_i = OS_i \times 60$. OS_i is the overall score (OS) obtained by each responsive bid (i) for all the point rated technical criteria specified in [Attachment 1 to Part 4](#), determined as follows: total number of points obtained / maximum number of points available.

4.2.1.5 The combined rating (CR) of technical merit and price of each responsive bid (i) will be determined as follows: $CR_i = PS_i + TMS_i$.

4.2.1.6 The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract. In the event two or more responsive bids have the same highest combined rating of technical merit



and price, the responsive bid that obtained the highest overall score for all the point rated technical criteria detailed in [Attachment 1 to Part 4](#) will be recommended for award of a contract.

4.2.1.7 The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of the technical merit and price, respectively.

Basis of Selection - Highest Combined Rating of Technical Merit (60%) and Price (40%)			
Bidder	Bidder 1	Bidder 2	Bidder 3
Overall Score for All the Point Rated Technical Criteria	OS1: 120/135	OS2: 98/135	OS3: 82/135
Bid Evaluated Price	P1: C\$60,000	P2: C\$55,000	LP and P3: C\$50,000
Calculations	Technical Merit Score (OSi x 60)	Pricing Score (LP/Pi x 40)	Combined Rating
Bidder 1	$120/135 \times 60 = 53.33$	$50/60 \times 40 = 33.33$	86.66
Bidder 2	$98/135 \times 60 = 43.56$	$50/55 \times 40 = 36.36$	79.92
Bidder 3	$82/135 \times 60 = 36.44$	$50/50 \times 40 = 40.00$	76.44



ATTACHMENT 1 TO PART 4 – EVALUATION PROCEDURES

Evaluation Disclaimer

The Technical Evaluation of the bids will be performed in two phases as follows:

Evaluation Phase 1: Mandatory Criteria

The mandatory criteria will be evaluated on a “Met/Not Met” (i.e. compliant/non-compliant) basis. Bids must demonstrate compliance with all of the following Mandatory requirements and must provide the necessary documentation to support a determination of compliance. Bids that fail to meet any mandatory requirements will be deemed non-compliant and will be given no further consideration.

Evaluation Phase 2: Point Rated Technical Criteria

The Bidder must obtain the required minimum number of points specified for the point rated technical criteria.

Overall Maximum Points Available	100
Overall Minimum Points Required	70

For each of the mandatory and point rated requirements listed below, the Bidder must provide, for each proposed resource, a copy of the resource curriculum vitae (CV) as well as summaries of projects outlining the qualifications and experience listed below, for both Corporate Criteria and Resources Criteria. It is the responsibility of the Bidder to indicate in the “Reference to Bidder’s Bid”, where in the Bid, the information can be found. The Bidder must be compliant with the mandatory criteria for the bid to be declared responsive, and to proceed to the point-rated evaluation. In its bid, the Bidder should provide one evaluation grid for each proposed resources. The submission must include the full name of the proposed resource and education and academic qualifications for each resource presented.

Summaries of project outlining the corporate and resources experience to support compliance should include:

- 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. 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 bid where the requested information can be found for both the mandatory and point rated requirements.

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



Example: If the mandatory and 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. Resource Categories

For the purpose of this evaluation, resource categories are defined as follows:

- a) A Senior resource is defined as having more than 10 years of experience in their field of expertise
- b) An Intermediate resource is defined as having between 5 and 10 years, inclusive, of experience in their field of expertise
- c) A Junior resource is defined as having less than 5 years of experience in their field of expertise.

B. 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.



Mandatory Criteria

The bid must meet the mandatory criterion specified below. The Bidder must provide the necessary documentation to support compliance with this requirement.

Bids which fail to meet the mandatory criterion will be declared non-responsive.

#	Mandatory Criteria	Met / Not Met	Bidder's cross-reference to proposal
M1	The Bidder must certify that all team members, including proposed subcontractors, have been and remain independent of research and development activities for probabilistic fracture mechanics methodologies for nuclear industry licensing applications in Canada.		

Point Rated Technical Criteria

Bids which meet all the mandatory criteria will be evaluated and scored as specified in the tables inserted below.

Bids which fail to obtain the required minimum number of points specified will be declared non-responsive. Each point rated technical criterion should be addressed separately.

#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	Bidder's cross-reference to proposal
R1	<p>Understanding of scope and objectives</p> <p>The bidder should demonstrate that they technically understand the objectives and scope.</p> <p>The Bidder should include a short introduction with a brief evaluation of the need for the project, the objectives of the proposed Work, and the reasons for carrying it out as</p>	5	<p>0 Points - incorrect understanding of scope and objective</p> <p>1 Point – given verbatim from RFP and understanding is not fully demonstrated</p> <p>3 Points - good understanding of scope and objectives</p> <p>5 Points - in-depth understanding of scope and objective fully demonstrated by providing new insights.</p>	x1	



	proposed and the benefits to be derived.				
R2	<p>Recognition of problems and solutions proposed</p> <p>The bidder should identify potential or anticipated problems and/or difficulties that could affect the outcome of the work and address how these will be addressed and resolved.</p>	10	<p>0 Points - fails to identify any potential problems</p> <p>1 Point - 1 to 2 difficulties identified; proposed solutions will not adequately resolve all</p> <p>2 Points - at least 3 difficulties identified; proposed solutions will not adequately resolve all</p> <p>3 Points - 1 to 2 difficulties identified; proposed solutions adequately resolve all</p> <p>4 Points - at least 3 difficulties identified; proposed solutions adequately resolve all</p> <p>5 Points - at least 2 difficulties identified; creativity and innovation are observable in the proposed solution(s)</p>	x2	
R3	<p>Proposed work feasibility, approach and methodology</p> <p>The Bidder should clearly outline its approach and proposed methodology to meet the requirement as well as the degree of success expected. The proposed approach is to be compliant with the requirements of the Statement of Work provided as part of the bid solicitation. Sufficient detail should be</p>	20	<p>0 Points - not addressed in proposal</p> <p>1 Point - approach and methodology does not expand from RFP</p> <p>3 Points - approach and methodology address the RFP requirements with adequate level of success</p> <p>5 Point - approach and methodology address the RFP requirements with high level of level of success</p> <p>7 Points - novel benchmarking approach /methodology with a</p>	x2	



	provided to demonstrate the Bidder's grasp of the requirement and the Bidder's competence to meet it.		adequate level of level of success 10 Points - novel benchmarking approach/methodology with a high level of level of success		
R4	<p>Adequacy of work plan, level of effort (per person/task) and schedule</p> <p>The bidder should provide a work plan include a list of specific tasks and deliverables, the level of effort (per person, per task) in hours or days, and the proposed schedule for completion or delivery.</p>	15	<p><u>Work Plan/ Tasks to be Performed</u></p> <p>0 Points - not addressed in proposal 1 Point - work plan does not expand from RFP 2 Points - work plan is well explained and meets the requirements of the RFP</p> <p><u>Schedule</u></p> <p>0 Points - not addressed in proposal 1 Point - schedule is as per RFP with no indication that bidder feels it is realistic 2 Points - adequate schedule</p> <p><u>Level of Effort</u></p> <p>0 Points - not addressed in technical proposal 2 Points - adequate total level of effort; critical work performed by junior personnel 4 Points - adequate total level effort, critical work performed by appropriate mix of junior/senior personnel 6 Points - adequate total level of effort; critical work performed by senior/expert personnel</p>	x1.5	



<p>R5</p>	<p>Proposed management of the project and the qualifications and relevant experience of the Project Manager, including position within the organization</p> <p>The Bidder should identify the Project Manager who will be assigned to this requirement, demonstrating position with organization, experience, education, and qualifications. His/her curriculum vitae should also be included.</p>	<p>10</p>	<p><u>Experience</u></p> <p>0 Points - no project mgmt experience; experience not demonstrated in proposal</p> <p>1 Point - 2 to 4 years project mgmt experience</p> <p>3 Points - 5+ years project mgmt experience</p> <p><u>Education</u></p> <p>0 Points - no formal project mgmt training</p> <p>1/2 Point - completed formal project management training, but no certification</p> <p>1 Point - PMP Certified (or recognized equivalent)</p> <p><u>Qualifications</u></p> <p>0 Points - not addressed</p> <p>1 Point - 2 to 4 successful projects as project manager</p> <p>2 Points - 5+ successful projects as project manager</p> <p><u>Position</u></p> <p>0 Points - not addressed</p> <p>1 Point - no authority to (re)direct resources</p> <p>3 Points - authority to (re)direct resources</p> <p><u>Other</u></p> <p>1 Point - project mgmt experience in</p>	<p>x1</p>	
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			related/relevant nuclear area		
R6	<p>Personnel capability - relevant experience, qualifications and competence proven by similar and/or related work</p> <p>The bidder should identify the proposed resources (including subcontractors) and demonstrate experience, education and qualifications. Their curriculum vitae must also be included.</p>	5	<p>See R6.1, R6.2, R6.3, and R6.4 for required qualifications and experience</p> <p>0 Points – Only one team member (not necessarily the same individual) qualifies for a score of at least 2 for each of R6.1 to R6.4.</p> <p>1 Point – Two or more team members qualify for a score of at least 2 for one of R6.1 to R6.4</p> <p>2 Points – Two or more team members qualify for a score of at least 2 for two of R6.1 to R6.4</p> <p>3 Points – Two or more team members qualify for a score of at least 2 for three of R6.1 to R6.4</p> <p>5 Points – Two or more team members qualify for a score of at least 2 for all of R6.1 to R6.4</p>	x1	
<p>For 6.1, 6.2, 6.3 and 6.4 please note that the <u>main resource</u> assigned to perform the related task(s) shall be evaluated for the associated experience required. If the main resource has not been identified and two or more resources with different experience levels have been named, the score assigned will be the average of the sum of the individual resource scores (e.g. manager level resource and subject matter expert identified with no clear assignment the score given shall be $(3+5)/2 = 4$</p> <p>“Recent experience” in the context of the evaluation criteria for 6.1 to 6.4 is defined as having worked on the specified subject matter within the last 5 years.</p>					
R6.1	The Bidder should demonstrate that the proposed resource(s) has recent experience in the application of probabilistic	5	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience</p>	x1	



	fracture mechanics to evaluate pressure boundary components.		<p>2 Points - less than 4 years but more than 2 years demonstrated experience</p> <p>4 Points - less than 10 years but more than 4 years demonstrated experience</p> <p>5 Points - more than 10 years demonstrated experience</p>		
R6.2	The Bidder should demonstrate that the proposed resource(s) has recent experience in, and extensive knowledge of the assessment of pressure boundary component design and fitness-for-service assessment of components, as applied to nuclear power plant licensing.	5	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience</p> <p>2 Points - less than 4 years but more than 2 years demonstrated experience</p> <p>4 Points - less than 10 years but more than 4 years demonstrated experience</p> <p>5 Points - more than 10 years demonstrated experience</p>	x1	
R6.3	<p>The Bidder should demonstrate that the proposed resource(s) has recent experience in nuclear power plant safety analysis evaluations for design basis accidents arising from initiating events attributed to postulated pressure boundary component failures.</p> <p>The proposed resource(s) should have experience evaluating initiating event</p>	5	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience</p> <p>2 Points - less than 4 years but more than 2 years demonstrated experience</p> <p>4 Points - less than 10 years but more than 4 years demonstrated experience</p> <p>5 Points - more than 10 years</p>	x1	



	frequencies.		demonstrated experience		
R6.4	<p>The Bidder should demonstrate that the proposed resource(s) has recent experience in practical applications of reliability theory to complex, multi-component systems.</p> <p>There should be a demonstrated understanding of relationships amongst reliability theory concepts including failure frequency, failure probability, reliability, hazard rate, etc.</p>	5	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience</p> <p>2 Points - less than 4 years but more than 2 years demonstrated experience</p> <p>4 Points - less than 10 years but more than 4 years demonstrated experience</p> <p>5 Points - more than 10 years demonstrated experience</p>	x1	
R7	<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>	5	<p>0 Points - not addressed in proposal</p> <p>1 Point - reporting structure not defined; proposed team have prior experience working together (less than 2 projects)</p> <p>2 Points - defined reporting structure; proposed team have no apparent experience working together</p> <p>3 Points - well defined reporting structure; proposed team have prior experience working together (less than 2 projects)</p> <p>5 Points - well defined reporting structure; proposed team have prior experience working together (more than 2 projects)</p>	x1	
R8	Bidder's organization, including subcontractors -	10	<p>0 Points - not addressed in proposal</p> <p>1 Point - bidder/subcontractor has</p>	x2	



	<p>its relevant experience and competence proven by similar work in nature and size, and resource capability</p> <p>The Bidder should demonstrate the background and experience of its organization, particularly as it relates to this requirement, as well as the background and experience of proposed subcontractors. Also, where subcontractors are proposed as part of the project team, the Bidder should provide a list of the individual subcontracts proposed, describe the work to be performed by each one and include/explain the proposed basis of selection for each one.</p>		<p>experience with 1 to 2 successful prior relevant project</p> <p>3 Points - bidder/subcontractor has experience with 3 to 4 successful prior relevant project</p> <p>5 Points - bidder/subcontractor are well known in field of study with 5+ successful prior relevant projects</p>		
	TOTAL	/100			



PART 5 – CERTIFICATIONS

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. 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](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html), all bidders must provide with their bid, if applicable, the Integrity declaration form available on the Forms for the Integrity Regime 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 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca/eng/employment-social-development) website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list at the time of contract award.

5.2.3 Former Public Servant

Contracts with 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 with FPS, bidders must provide the information required below.



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, 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, 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 Reduction Program

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? **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 reduction 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.

5.2.4 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.

5.2.5 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.

5.3 Certifications

By submitting a bid, the Bidder certifies that the information submitted by the Bidder in response to the above requirements is accurate and complete.

Signature of Bidder's Authorized Representative

Date



PART 6 – RESULTING CONTRACT CLAUSES

It is understood that the procurement of services for the Canadian Nuclear Safety Commission (CNSC) falls under the provisions of the *Nuclear Safety and Control Act*, S.C. 1997, c. 9.

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

6.1 STATEMENT OF WORK

The Contractor must perform the Work in accordance with the Statement of Work in [Annex A](#), and the Contractor's technical bid entitled _____, dated _____.

6.2 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 \(SACC\) Manual](#) issued by Public Works and Government Services Canada.

With the exception of the Integrity Provisions of the General Conditions, all references to "Canada", "Crown", "Her Majesty", "the Government" or "the Minister" in the clauses and conditions included herein, including those incorporated by reference, shall mean Her Majesty the Queen in right of Canada as represented by the Canadian Nuclear Safety Commission and its presiding Minister as appropriate.

6.2.1 General Conditions :

[2035 \(2018-06-21\), General Conditions – Higher Complexity – Services](#), apply to and form part of the Contract.

The text under Section 34 – Conflict of Interest and Values and Ethics Codes for the Public Service, of General Conditions 2035 referenced above is replaced by:

- 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>.



6.2.2 Supplemental General Conditions

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

6.2.2.1 License to Material Subject to Copyright (K3030C – 2010-01-11)

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.

6.2.3 Inspection and Acceptance

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

6.3 SECURITY REQUIREMENT

There is no security requirement applicable to this Contract.

6.4 TERM OF CONTRACT

6.4.1 Period of the Contract

The period of the Contract is from _____ to _____ inclusive.

6.5 AUTHORITIES

6.5.1 Contracting Authority

(To be identified at contract award)

The Contracting Authority for the Contract is:



Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ___ - ___ - ___
Facsimile: ___ - ___ - ___
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.

6.5.2 Project Authority

(To be identified at contract award)

The Project Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ___ - ___ - ___
Facsimile: ___ - ___ - ___
E-mail address: _____

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

6.5.3 Technical Authority

The Technical Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ___ - ___ - ___
Facsimile: ___ - ___ - ___
E-mail: _____.

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.

6.5.4 Contractor's Representative

(To be identified at contract award)



6.6 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.

6.7 PAYMENT

6.7.1 Basis of Payment – Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price of \$ _____. Customs duties are included and Applicable Taxes are extra.

6.7.2 Travel and Living Expenses

All Travel and Living Expenses are included in the price of the contract. Canada will not reimburse any travel or living expenses associated with performing the Work.

6.7.3 Limitation of Price

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.

6.7.4 Method of Payment – Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in [Annex B](#) and the payment provisions of the Contract if:

- i. 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;
- ii. all such documents have been verified by Canada;
- iii. the Work performed has been accepted by Canada.

6.7.5 T1204 – Information Reported by Contractor (A9116C – 2007-11-30 - modified)

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.
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.
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".



6.7.6 Payment by Direct Deposit

- a) Payments by direct deposit will be subject to Article 16 – Payment Period and Article 17 - Interest on Overdue Accounts, set out in [2035 General Conditions – Higher Complexity, Services \(2018-06-21\)](#) forming part of this Contract.
- b) To complete or amend a direct deposit registration, the Contractor must complete and submit to the Contracting Authority a Direct Deposit Enrolment Form, which is available on demand.
- c) It is the sole responsibility of the Contractor to ensure that the information and account number submitted to Canada via their Direct Deposit Enrolment Form is up to date. Should the Contractor's information within the Direct Deposit Enrolment Form not be accurate or up to date, the provisions identified herein under (Article 16 – Payment Period and Article 17 - Interest on Overdue Accounts, set out in [2035 General Conditions – Higher Complexity, Services \(2018-06-21\)](#) forming part of this Contract will not apply, until the Contractor corrects the matter.

6.7.7 C2000C (2007-11-30) Taxes Foreign Based Contractor (If applicable)

Unless specified otherwise in the Contract, the price includes no amount for any federal excise tax, state or local sales or use tax, or any other tax of a similar nature, or any Canadian tax whatsoever. The price, however, includes all other taxes. If the Work is normally subject to federal excise tax, Canada will, upon request, provide the Contractor a certificate of exemption from such federal excise tax in the form prescribed by the federal regulations.

Canada will provide the Contractor evidence of export that may be requested by the tax authorities. If, as a result of Canada's failure to do so, the Contractor has to pay federal excise tax, Canada will reimburse the Contractor if the Contractor takes such steps as Canada may require to recover any payment made by the Contractor. The Contractor must refund to Canada any amount so recovered.

6.8 INVOICING INSTRUCTIONS

- a. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" in the General Conditions.
- b. The original and one (1) copy must be forwarded to the following address for certification and payment.

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

Or submitted electronically at: cnsf.finance-finance.ccsn@canada.ca

- c. The Contractor shall include the contract number and appropriate Applicable Taxes registration number on all invoices pertaining to the contract.
- d. The last and final invoice under the contract shall be clearly marked "final invoice".

6.9 CERTIFICATIONS

6.9.1 Compliance

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



6.10 APPLICABLE LAWS

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

6.11 PRIORITY OF DOCUMENTS

If there is a discrepancy between the wording of any documents that appear on the following list, the wording of the document that first appears on the list has priority over the wording of any document that appears later on the list:

- a. these Articles of Agreement;
- b. the supplemental general conditions [4006 \(2010-08-16\) Contractor to Own Intellectual Property Rights in Foreground Information](#);
- c. [2035 \(2018-06-21\), General Conditions – 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*], as amended [_____] [*insert date(s) of amendment(s) if applicable*].

6.12 FOREIGN NATIONALS

[SACC Manual Clause A2000C \(2006-06-16\) Foreign Nationals \(Canadian Contractor\)](#)

OR

[SACC Manual Clause A2001C \(2006-06-16\) Foreign Nationals \(Foreign Contractor\)](#)

6.13 INSURANCE

[SACC Manual clause G1005C \(2016-01-28\), Insurance – No Specific Requirement](#)

6.14 THIRD-PARTY INFORMATION

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.
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.
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.

6.15 DISPUTE RESOLUTION

1. The parties must first attempt to resolve disputes arising in connection with this contract through direct good-faith negotiations. Such negotiations shall be undertaken for a maximum period of 30 working days unless resolved earlier. The parties may agree to an extension of the 30 working day period upon agreement in writing by each party.



2. All disputes, questions or differences arising in connection with this contract which cannot be resolved by the parties as set out in subsection 1 shall be resolved in an efficient and cooperative manner through mediation or any other such third-party assistance process as may be appropriate and agreed upon. Such a process shall be undertaken for at least 20 working days unless resolved earlier. The parties may agree to an extension of this 20 working day period upon agreement in writing by each party.
3. All disputes, questions or differences arising in connection with this contract, which the parties cannot resolve themselves through direct negotiations or the appropriate dispute resolution efforts discussed in subsection 2 shall be finally settled by binding arbitration.
4. The parties shall appoint a single arbitrator. The appointment of an arbitrator shall occur within 30 calendar days of the decision to proceed to binding arbitration. If such appointment has not occurred within this 30 calendar day period, then the parties shall apply to a Justice of the Ontario Court (General Division) in Ottawa to have an arbitrator appointed.
5. The arbitration shall be in accordance with the *Commercial Arbitration Act*, R.S.C., 1985, c.17 and shall take place in Ottawa, Ontario.
6. The arbitrator may appoint a secretary with the prior written permission of the parties. The fees of the sole arbitrator and of the secretary shall be shared equally by each of the parties. Notwithstanding the above, the arbitrator shall be authorized to require any party to pay the whole or part of the fees, costs and expenses. In such case, payments shall be made in accordance with the award and the award shall be final and shall not be subject to appeal.
7. This section does not apply in respect of the interpretation or application of constitutional, administrative, criminal or tax law or other law as may be determined and agreed upon by the parties. Except with respect to the laws expressly listed herein, if no agreement is reached regarding this article's application with respect to other areas of law, then the matter shall be subject to binding arbitration.
8. The parties understand that the Procurement Ombudsman appointed pursuant to subsection 22.1(1) of the *Department of Public Works and Government Services Act* will, on request, and consent of the parties, to participate in an alternative dispute resolution process to resolve any dispute between the parties respecting the interpretation or application of a term and condition of this contract and their consent to bear the cost of such process, provide to the parties a proposal for an alternative dispute resolution process to resolve their dispute. The Procurement Ombudsman will also review a complaint filed by the Contractor respecting administration of this contract if the requirements of subsection 22.2(1) of the *Department of Public Works and Government Services Act* and Sections 15 and 16 of the *Procurement Ombudsman Regulations* have been met, and the interpretation and application of the terms and conditions and the scope of the work of this contract are not in dispute. The Office of the Procurement Ombudsman may be contacted by telephone at 1-866-734-5169 or by e-mail at boa.opo@boa.opo.gc.ca.



ANNEX A – STATEMENT OF WORK

1.0 Title

Review of the Basis for Establishing Probabilistic Fracture Mechanics Acceptance Criteria

2.0 Background

Because of perceived conservatism identified in deterministic fracture mechanics applications adopted by codes, standards and guidelines used for nuclear power plant (NPP) pressure boundary component evaluations, the nuclear industry continues to investigate the adoption of probabilistic fracture mechanics (PFM) methodologies. There has been a great deal of focus on the development of PFM software tools and verification and validation of those tools. While challenges still remain in those areas, there appears to have been considerably less effort spent on the development of the technical basis for acceptance criteria that can be adopted by industry codes, standards and regulations. To date, development of acceptance criteria appears to be treated on an ad-hoc basis.

When new applications for the use of PFM to assess the effects of pressure boundary component aging are conceptualized, regulatory bodies must consider acceptance criteria that establish safety margins consistent with the licensing basis for NPPs. At this time regulations, standards and codes generally do not prescribe acceptance criteria that would permit a straightforward application of PFM evaluations to satisfy licensing requirements for NPPs. Decisions related to acceptable failure frequencies or probabilities are often considered on a scenario specific basis.

When establishing acceptance criteria for regulatory decisions, CNSC staff must consider the intent of the application in relation to the appropriate level of Defence-in-Depth. The five levels of Defence-in-Depth described in REGDOC-2.5.2, *Design of Reactor Facilities: Nuclear Power Plants* can be summarized as follows:

Level 1: Prevent deviations from normal operation and prevent failures of structures, systems and components (SSCs) important to safety

Level 2: To detect and intercept deviations from normal operation, in order to prevent anticipated operational occurrences (AOOs) from escalating to accident conditions and return the plant to state of normal operation

Level 3: Minimize the consequences of accidents by providing inherent safety features, fail-safe design, additional equipment and mitigating procedures

Level 4: Ensure radioactive releases caused by severe accidents are kept as low as practical

Level 5: Mitigate radiological consequences of potential release of radioactive materials that may arise from accident conditions

To put this into perspective, a fracture mechanics evaluation used to demonstrate the structural integrity of a pressure boundary component would fall under Level 1. Demonstrating that a component containing a flaw will withstand applied loading while maintaining the safety margins inherent in the design code could be the objective of this type of evaluation. A fracture mechanics evaluation to support a Loss of Coolant Accident (LOCA) safety analysis assessment would fall under Level 3 or Level 4. Such an evaluation could include demonstrations that double-ended guillotine pipe breaks are highly unlikely under design basis loading conditions or demonstrations that expected component failure frequencies or probabilities are sufficiently low such that target Core Damage Frequencies or Large Release Frequencies would not be exceeded. While Level 3 or 4 acceptance criteria can often be directly related to probabilistic or reliability based parameters, current design codes generally do not express safety margins in terms of probability or reliability, which can complicate the adoption of PFM based assessments for Level 1 structural integrity evaluations.



In addition to regulatory framework considerations adherence to reliability theory principles must also be considered. For example, the treatment of a system or component as a repairable or non-repairable system, which in the context of reliability theory, can impact the appropriate parameter that should be used as the basis for acceptance criteria (cumulative probability, failure rate, failure frequency, hazard rate, etc.).

CNSC staff have observed that many publications in the public domain offer conflicting descriptions of acceptance criteria proposed for PFM based evaluations because Defence-in-Depth and reliability theory concepts are not rigorously considered. A value of 1×10^{-6} is often quoted as the numerical value associated with acceptance criteria, but in some publications the value is quoted as an annual frequency of failure and in others it can be referred to as a cumulative probability of failure for the life of a component. In some instances, the value of 1×10^{-6} is used as an acceptance criterion for analyses where the endpoints of the assessments may be different. For example, the endpoint may be based upon the frequency of through wall crack formation or as the frequency of component rupture. These endpoints are not necessarily the same if it can be demonstrated that a stable through wall crack is possible without immediately progressing to a rupture.

3.0 Objectives

The Contractor must address the following objectives:

1. Summarize the review of efforts described in public domain documents to develop acceptance criteria for PFM applications. Highlight commonalities and differences in considerations that form the basis for the acceptance criteria.
2. Provide recommendations to CNSC staff concerning the adoption or development of acceptance criteria for PFM evaluations for different applications considering the regulatory requirements associated with Defence-in-Depth principles applied to nuclear power plants.
3. If applications require the development of acceptance criteria that satisfy safety margins in existing, deterministic based design codes, provide recommendations to CNSC staff to assist in establishing a measure of equivalence between existing deterministic and proposed probabilistic acceptance criteria.
4. Provide a summary of any inconsistencies in the development or use of PFM acceptance criteria observed in public domain documentation describing PFM assessments for nuclear industry applications and discuss the potential implications of these inconsistencies in terms of the current Canadian NPP licensing basis.
5. Provide guidance to CNSC staff to ensure that acceptance criteria are based upon appropriate reliability theory principles and a discussion of the consequences of not adhering to those principles.

4.0 Scope of Work

The Contractor must carry out a review of publically available documentation from a variety of sources to achieve the objectives stated above. The review must include a summary of international nuclear industry activities related to:

- Guidance for the development of acceptance criteria for PFM evaluations
- Defence-in-Depth considerations in the development of acceptance criteria
- The application of reliability theory concepts to support the development of appropriate acceptance criteria
- Recommendations for improvements to ensure consistency in the development of acceptance criteria meeting CNSC regulatory requirements

The Contractor must prepare a final report documenting the results of the review addressing the project objectives.

Documents that can be used as starting points for the review are suggested below:



- CNSC REGDOC-2.5.2, *Design of Reactor Facilities: Nuclear Power Plants*
- CNSC REGDOC-2.4.1, *Safety Analysis: Deterministic Safety Analysis*
- CNSC REGDOC-2.4.2, *Safety Analysis: Probabilistic Safety Assessment (PSA) for Nuclear Power Plants*
- CSA Standard N285.8, *Technical requirements for in-service evaluation of zirconium alloy pressure tubes in CANDU reactors*
- US Nuclear Regulatory Commission NUREG-1874, *Recommended Screening Limits of Pressurized Thermal Shock (PTS)*
- Draft Document: *Important Aspects of Probabilistic Fracture Mechanics Analysis*, P. Raynaud, M. Kirk, M. Benson and M. Homiack
- Electric Power Research Institute Materials Reliability Program MRP-362, *Technical Basis for ASME Section XI Code Case on Flaw Tolerance of Cast Stainless Steel (CASS) Piping*
- xLPR Version 2.0 Technical Basis Document, *Acceptance Criteria*
- CNSC Research Report R617.1, *Technical Basis of a Probabilistic Method for PT-CT Contact Assessment*
- American Society of Mechanical Engineers Pressure Vessels and Piping Conference Proceedings

5.0 Tasks to be Performed

The Contractor must:

- 5.1 Prepare a comprehensive list of references describing international efforts that can be used to support the review objectives.
- 5.2 Summarize the extent to which the intent of the different levels of Defence-in-Depth have been considered in the establishment of currently implemented or proposed acceptance criteria for PFM evaluations.
- 5.3 Provide recommendations for CNSC staff when evaluating acceptance criteria for PFM evaluations to ensure that the intent of the levels of Defence-in-Depth are respected.
- 5.4 Summarize work that has been completed to demonstrate the equivalency of probabilistic acceptance criteria to deterministic design margins in nuclear codes and standards and provide recommendations for CNSC staff for the potential future adoption of such acceptance criteria.
- 5.5 Summarize work that has been completed to establish probabilistic acceptance criteria for safety analysis based PFM evaluations and provide recommendations for CNSC staff for the potential future adoption of such acceptance criteria.
- 5.6 Summarize commonalities and inconsistencies in the development or use of probabilistic acceptance criteria for PFM applications discussed in public domain documentation. For inconsistencies identified, provide a discussion of the potential implications of these inconsistencies in relation to regulatory safety margins.
- 5.7 Summarize reliability theory principles relevant to PFM applications that should be considered for nuclear industry applications and provide recommendations to ensure that these principles are respected during the development of PFM acceptance criteria.

6.0 Deliverables

- 6.1 Start-up Meeting



Date: Within 14 calendar days following award of the contract

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 must make a presentation with the above purpose in mind.

6.2 Progress Meetings

Dates: Every 60 calendar days for the duration of the contract

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

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. Progress meetings must be followed by email correspondence summarizing the current status of the project activities and agreements made during the progress meetings.

6.3 First Formal Progress Report

The Progress Report must address the work performed up to the mid-point of the contract, according to the project schedule as agreed upon at the project kick-off meeting. The report must also include the following:

- An executive summary that includes preliminary conclusions and recommendations.
- A table of contents.
- A brief summary of review findings up to that point.

Due Date: Five (5) months following award of the contract

Copies: One electronic copy via email to the Project Authority

Format and style requirements: The progress reports must follow the requirements set out for the Final Report except a version readable by Adobe Acrobat Reader DC is not required.

6.4 Draft Final Report

Due Date: Ten (10) months following award of the contract

Copies: One electronic copy via email to the Project Authority

Format and style requirements: As specified in the Final Report except a version readable by Adobe Acrobat Reader DC is not required.

6.5 Presentation

Due Date: Eleven (11) months following award of the contract

Location: The CNSC Head Office, Ottawa

Purpose: To present the project findings, conclusions and recommendations documented in the Draft Report to CNSC staff and interested industry stakeholders.

6.6 Final Report

Due Date: Twelve (12) months following award of the contract



Copies: One electronic copy via email to the Project Authority

Format & style requirements:

The font Times New Roman 12 is to be used. One electronic copy must be provided in a format readable by Word 2010 with minor formatting changes and one electronic copy readable by Adobe Acrobat Reader DC. Any electronic files that cannot be read or require major formatting changes when opened are not acceptable and may be returned to the contractor for correction. The CNSC reserves the right, at its own discretion, to have the final report printed under CNSC cover, and to distribute it publicly. Translation of the abstract into French or English, CNSC report covers and the publication number will be provided by the CNSC.

7.0 Government Furnished Equipment/Information (if applicable)

N/A

8.0 Language of Work

The contractor must perform and deliver the work 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

All work must be completed at the contractor's location. The contractor must give their final presentation at the CNSC head office in Ottawa, ON. The start-up meeting and progress meetings (Deliverables 6.1 and 6.2) can take place via tele/videoconference.



ANNEX B – BASIS OF PAYMENT

1.0 Schedule of Milestones

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

Milestone No.	Description or "Deliverable"	Due Date	Firm All-inclusive Amount
1	First Formal Progress Report	5 months after contract award	(50% of Total Firm Bid Price)
2	Final Report	12 months after contract award	(50% of Total Firm Bid Price)
Total Firm Price:			\$ _____
(Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included)			
<i>Total Estimated Applicable Taxes:</i>			\$ _____