



RETURN BIDS TO:

Canadian Nuclear Safety Commission (CNSC)

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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

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: Third-party review of the availability of EPRI recommendation practices for a Flow Accelerated Corrosion Program to CANDU Nuclear Piping Systems.	
Solicitation no.: 87055-15-0099	Date: October 28, 2015
File No. – N° de dossier:	
Solicitation closes: December 7, 2015 At 2 p.m. / 14 h	Time zone: Eastern Standard Time (EST)
Address inquiries to: Alex Cassol, Senior Contracting Officer	
Telephone: 613-996-6638	Fax: 613-995-5086
Email: alex.cassol@canada.ca	
Destination: See herein	
Delivery required:	Delivery offered:
Supplier name and address:	
<p>Telephone:</p> <p>Fax:</p> <p>Name and title of person authorized to sign on behalf of supplier (type or print):</p>	
Signature	Date



Bid Solicitation

For the Provision of

Third-party review of the applicability of EPRI Recommendations Practices for a Flow Accelerated Corrosion Program to CANDU nuclear piping systems



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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 Security Requirement

There is no security requirement associated with the requirement.

1.2 Statement of Work

The work to be performed is detailed in Annex A attached to this contract.

1.3 Debriefings

After a contract is awarded, bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the contracting authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 – BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions (A0000T – 2012-07-16 – modified)

- 2.1.1 All instructions, clauses and conditions incorporated by reference in the bid solicitation (number, date and title) are set out in the [Standard Acquisition Clauses and Conditions \(SACC\) Manual](http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by PWGSC. All of the clauses of this document are legally binding on the parties.
- 2.1.2 Annexes A and B form part of the legally binding agreement between the parties.
- 2.1.3 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.
- 2.1.4 The 2003 dated (2015-07-03) 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) Replace references to “Canada” and “Public Works and Government Services Canada” (or “PWGSC”) with “Canadian Nuclear Safety Commission” (CNSC).
 - b) Revise subsection 2d of section 5, Submission of Bids, to read:
“send its bid only to the CNSC 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: ninety (90) days
 - d) Delete section 8, Transmission by Facsimile, in its entirety.
 - e) 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.

- f) 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.

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

2.2 Submission of Bids

2.2.1 Bids must be submitted only to the CNSC by the date, time and place 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.

See Part 5 – Certifications, Certification required with the bid and section 6.6 of Part 6 – Resulting Contract Clauses.



2.4 Enquiries – Bid Solicitation

- 2.4.1 All inquiries must be submitted in writing to the contracting authority no later than ten (10) 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 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.

PART 3 – BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

3.1.1 The CNSC requests that bidders provide their full company name and address, as well as a contact name, telephone number and fax number.

3.1.2 The CNSC requests that bidders provide copies of their bid in separate attachments, as follows:

Section I: Technical Bid 1 electronic copy

Section II: Financial Bid 1 electronic copy

Section III: Certifications 1 electronic copy

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

3.1.4 The CNSC requests that bidders follow these format instructions in the preparation of their bids:

- a) use a numbering system that corresponds to the bid solicitation

3.1.6 In April 2006, Canada issued the [Policy on Green Procurement \(tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html\)](http://tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html), which directed federal departments and agencies to incorporate environmental considerations into the procurement process. To assist Canada in reaching its objectives, bidders should:

- a) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably managed forest and/or containing minimum 30% recycled content



- b) use an environmentally preferable format, including black and white printing instead of colour printing, printing double-sided/duplex, and staples or clips instead of cerlox, duotangs or binders

3.1.7 Section I: Technical Bid

- a) In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.
- b) Technical bids should address clearly and in sufficient depth the elements 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 evaluation of bids, the CNSC requests that bidders address and present topics in the order of the evaluation criteria and 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.
- c) Technical bids must demonstrate compliance with all mandatory evaluation criteria and should specifically respond to each of the point-rated technical evaluation criteria.
- d) If a mandatory evaluation criterion is not complied with, the bid will be considered non-responsive and will not receive further consideration. Variations on mandatory criteria will not be accepted.

3.1.8 Section II: Financial Bid

- a) Bidders must submit their financial bids **in Canadian dollars**, in accordance with the pricing schedule detailed in Attachment 1 to Part 3 of this bid solicitation. The total amount of Applicable Taxes must be shown separately, if applicable. Bidders must also reference Annex B, Basis of Payment, when preparing their financial bids.
- b) The financial bid **must** also include costs as follows:
 - i. a detailed cost breakdown, including fees for each resource category,
 - ii. an estimate of the general expenses expected to be incurred during the performance of the work, such as equipment, materials and supplies, communication costs, travel costs, and subcontracts.

3.1.9 Estimated Funding by Fiscal Year

- a) The estimated funding breakdown per government fiscal year (April 1–March 31) is as follows:

Fiscal year 2015–16: 25%

Fiscal year 2016–17: 75%

- b) Amounts expressed above are only an approximation of the requirement and are not to be considered as a contract guarantee.

3.1.10 Section III: Certifications

Bidders must submit the certifications required under Part 5 of this bid solicitation.



ATTACHMENT 1 TO PART 3 – PRICING SCHEDULE

1. The bidder must complete this pricing schedule and include it in its Financial Bid.
2. Any estimated level of effort 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 effort are provided as estimates only, and must not be construed as a commitment by the CNSC to respect those estimated in any resulting contract.

Firm all-inclusive price, including travel cost, for each deliverable:

Deliverables	Delivery date	Firm Price - %	Firm Price - \$
On delivery of First Formal Progress Report (Task 5.3)		25%	
On completion of Draft Final Report (Task 5.4)		25%	
On delivery of Presentation (Task 5.5)		25%	
On delivery of final report (Task 5.6)		25%	
Total bid evaluation price (Applicable Taxes are extra)			

The bidder may propose a different deliverables schedule in the bid; however, all payments must be linked to specific deliverables with at least 20 percent reserved for final payment.



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 CNSC representatives will evaluate the bids.

4.1.1 Technical Evaluation

a) 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

- 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.

4.1.3 Evaluation of Price (A0220T – 2014-06-26)

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

4.1.4 Maximum Funding (A0210T – 2013-04-25)

The maximum funding available for the Contract resulting from the bid solicitation is **\$40,000.00**, (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

Basis of Selection – Highest Rated Within Budget (A0036T – 2007-05-25)

1. To be declared responsive, a bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. obtain the required minimum of **75 points overall** for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of **100** points.
2. Bids not meeting any of the requirements set out above in subsection 1 will be declared non-responsive.
3. The responsive bid with the highest number of points will be recommended for award of a contract, provided that the total evaluated price does not exceed the budget available for this requirement.



Attachment 1 to Part 4 – Evaluation Procedures

1. Point-Rated Technical Criteria

- 2.1 Any bid that meets all the mandatory technical criteria will be evaluated and scored in accordance with the following table. The Bidder must provide the necessary documentation to demonstrate its qualifications and capabilities in relation to each criterion.
- 2.2 Any bid that fails to obtain the required minimum number of points specified will be declared non-responsive and will receive no further consideration.

#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
R1	<p>Understanding of scope and objectives</p> <p>The bidder should demonstrate that they 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 proposed and the benefits to be derived.</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</p>	x1		



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
R2	<p>Recognition of problems and solutions proposed</p> <p>The bidder should identify potential or anticipated major 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 1 Point - 1 to 2 major difficulties identified; proposed solutions will not adequately resolve all 2 Points - 1 to 2 major difficulties identified; proposed solutions adequately resolve 3 Points - 3 to 4 major difficulties identified; proposed solutions will not adequately resolve all 4 Points - 3 to 4 major difficulties identified; proposed solutions adequately resolve all 5 Points - 5 or more difficulties identified, proposed solutions are innovative</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 provided to demonstrate the Bidder's grasp of the requirement and the Bidder's competence to meet it.</p>	20	<p>0 Points - not addressed in proposal 1 Point - approach and methodology does not expand from RFP 3 Points - approach and methodology address the RFP requirements with adequate level of success 5 Point - approach and methodology address the RFP requirements with high level of level of success 7 Points - novel benchmarking approach /methodology with a adequate level of level of success 10 Points - novel benchmarking approach/methodology with a high level of success</p>	x2	x2=	



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
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> 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> 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> 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 recognized subject matter experts</p>	x1.5	<p><u>Work Plan</u> x1.5= <u>Schedule</u> x1.5= <u>Effort</u> x1.5= Total=</p>	



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
R5	<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>	10	<p><u>Experience</u> 0 Points - no project management experience; experience not demonstrated in proposal 1 Point - 2 to 4 years project management experience 3 Points - 5+ years project management experience</p> <p><u>Education</u> 0 Points - no formal project management training 1/2 Point - formal project management training 1 Point - PMP Certified</p> <p><u>Qualifications</u> 0 Points - not addressed 1 Point - 2 to 4 successful projects as project manager 2 Points - 5+ successful projects as project manager</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</p>	x1	<p><u>Experience</u> x1=</p> <p><u>Education</u> x1=</p> <p><u>Qualifications</u> x1=</p> <p><u>Position</u> x1=</p> <p><u>Other</u> x1=</p> <p>Total=</p>	



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
R6.0	<p>Key personnel capability - relevant experience, qualifications and competence proven by similar and/or related work</p> <p>The bidder should identify the proposed resources (included subcontractors) and demonstrate experience education and qualifications. Their curriculum vitae must also be included.</p>	5	<p>See R6.1, R6.2, R6.3, R6.4 for minimum required qualifications and experience</p> <p>0 Points - proposed personnel does not meet minimum requirements</p> <p>1 Point - half of proposed personnel meets minimum levels only</p> <p>2 Points - proposed key personnel meet minimum levels only</p> <p>3 Points - half of proposed key personnel exceeds minimum levels</p> <p>4 Points – over half of the proposed personnel meet minimum levels but not all</p> <p>5 Points - all proposed key personnel exceed minimum levels</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>						
R6.1	<p>Demonstrated experience with the design and operation of CANDU Nuclear Power Plant nuclear pressure boundary systems</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		



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
R6.2	Demonstrated knowledge of factors contributing to FAC of piping systems. The following are examples of activities that will be considered: consulting projects, participation in industry working groups/committees and/or publications in journals or conference proceedings	5	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - less than 4 years but more than 2 years demonstrated experience 4 Points - less than 10 years but more than 4 years demonstrated experience 5 Points - more than 10 years demonstrated experience	x1		
R6.3	Demonstrated experience using the EPRI Flow Accelerated Corrosion Recommended Practices	5	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - less than 4 years but more than 2 years demonstrated experience 4 Points - less than 10 years but more than 4 years demonstrated experience 5 Points - more than 10 years demonstrated experience	x1		
R6.4	Demonstrated experience using other (not published by EPRI) guidelines or recommended practices for the control/modelling of FAC	5	0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience 2 Points - less than 4 years but more than 2 years demonstrated experience 4 Points - less than 10 years but more than 4 years demonstrated experience 5 Points - more than 10 years demonstrated experience	x1		



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
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>	10	<p>0 Points - not addressed in proposal</p> <p>1 Point - reporting structure not defined</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>	x2		



#	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Assigned Mark	Rational/Justification for Mark
R8	<p>Bidder's organization, including subcontractors - 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>	5	<p>0 Points - not addressed in proposal</p> <p>1 Point - bidder/subcontractor has 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>	x1		
	TOTAL	100				



PART 5 – CERTIFICATIONS

- 5.1** Bidders must provide the required certifications and associated information to be awarded a contract.
- 5.2** The certifications provided by the bidders to the CNSC are subject to verification by CNSC at all times. CNSC will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly during the bid evaluation period or during the contract period.
- 5.3** The Contracting Authority will have the right to ask for additional information to verify bidders' certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

5.4 Certification Required With the Bid

By submitting a bid, the Bidder certifies the following:

5.4.1 Status and Availability of Resources (A3005T – 2010-08-16)

1. 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 the CNSC representatives and at the time specified in the bid solicitation or agreed to with the CNSC. 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.
2. 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 the CNSC. 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.

5.4.2 Education and Experience (A3010T – 2010-08-16)

1. 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.
2. 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.

5.5 Mandatory Certifications Precedent to Contract Award

The certifications listed below *should be completed and submitted with the bid, but may be submitted afterwards*. If any of these required certifications is not completed and submitted as requested, the contracting authority will so inform the bidder and provide the bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.



5.6 Federal Contractors Program for Employment Equity – Bid Certification

- 5.6.1 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 [Human Resources and Skills Development Canada \(HRSDC\) - Labour's](http://www.hrsdc.gc.ca) website.
- 5.6.2 CNSC 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.

5.7 Former Public Servant – Competitive Bid (A3025T – 2014-06-26)

- 5.7.1 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, CNSC will inform the Bidder of a time frame within which to provide the information. Failure to comply with CNSC's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

5.7.2 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, in the context of the fee abatement formula, a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S.C, 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.C, 1985, c. C-17, the [Defence Services Pension Continuation Act](#), R.S.C. 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.C, 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S.C, 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S.C, 1985, c. C-8.

Former public servant in receipt of a pension

- Is the bidder a FPS in receipt of a pension as defined above? **Yes** () **No** ()
- Is the bidder or the bidder's employee a former CNSC/AECB (Atomic Energy Control Board) employee?
Yes () **No** ()



If so, the bidder must provide the following information:

- 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](#).

Workforce Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of a 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.

5.8 Integrity Provisions – List of Names

- a) Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.
- b) Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).
- c) Bidders bidding as societies, firms or partnerships do not need to provide lists of names.



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 Security Requirement

There is no security requirement associated with the requirement.

6.2 Statement of Work (B4007C – 2014-06-26)

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

6.3 Standard Clauses and Conditions (A0000C – 2012-07-16 – modified)

6.3.1 All clauses and conditions incorporated by reference in the contract (number, date and title) are set out in the *Standard Acquisition Clauses and Conditions (SACC) Manual* (buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada. All of the clauses of this document are legally binding on the parties. The following changes are made:

Wherever “Public Works and Government Services Canada” or “Canada” appears in any of the standard clauses or the general or supplemental general conditions, replace with “Canadian Nuclear Safety Commission” (or “CNSC”).

6.3.2 Annexes A and B form part of the legally binding agreement between the parties.

6.3.3 General Conditions

2010B (2015-09-03), General Conditions – Professional Services (Medium Complexity) apply to and form part of the contract. The following change is made:

- a) Replace section 27 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* or the *CNSC Conflict of Interest and Post-Employment Policy* cannot derive any direct benefit resulting from the contract. Post-employment procedures apply to individuals who have left the public sector.
 - ii. The CNSC Values and Ethics Code and CNSC Conflict of Interest and Post-Employment Policy can be found at <http://www.nuclearsafety.gc.ca/eng/about-us/values-and-ethics/index.cfm>

6.3.4 Supplemental General Conditions

- i. 4007 (2010-08-16) Canada to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.



- ii. A2000C (2006-06-16) Foreign Nationals (Canadian Contractor) apply to and form part of the Contract.

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.

- iii. A2001C (2006-06-16) Foreign Nationals (Foreign Contractor) apply to and form part of the Contract.

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.

6.4 Term of Contract

6.4.1 Period of the Contract (A9022C – 2007-05-25)

The period of the contract is from date of contract to March 31, 2017 inclusive.

6.5 Authorities

6.5.1 Contracting Authority

The contracting authority for the contract is:

Alex Cassol, Senior Contracting Officer
Canadian Nuclear Safety Commission
Corporate Services Branch
P.O. Box 1046, Station B
280 Slater Street
Ottawa, Ontario K1P 5S9
Canada

Telephone: 613-996-6638

Fax: 613-995-5086

Email: alex.cassol@canada.ca

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



6.5.2 Project Authority

The project authority for the contract is:

Name:

Title:

Canadian Nuclear Safety Commission
P.O. Box 1046, Station B
280 Slater Street
Ottawa, Ontario K1P 5S9
Canada

Telephone: 613-9xx-xxxx

Fax: 613-995-5086

Email: _____@canada.ca

The project authority is the representative of the CNSC 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 Contractor's Representative

Name:

Title:

Telephone:

Fax:

Email:

6.6 Proactive Disclosure of Contracts with Former Public Servants (A3025C – 2013-03-21)

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#), R.C.S. 1985, c. P-36 pension, the contractor has agreed that this information will be reported on departmental Web sites 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

For the satisfactory performance of the contract, the contractor shall be paid in accordance with the basis of payment, which is found in Annex B attached to this contract.

6.7.2 Method of Payment – Deliverables Payments

Payment will be made in accordance with the schedule of deliverables set out in Annex B attached to this contract.

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

- 6.7.3.1 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.

6.7.3.2 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.

6.7.3.3 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".

6.8 Invoicing Instructions

6.8.1 Invoices can be emailed to cnsf.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

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

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

6.9 Certifications

6.9.1 Instructions to Bidders/Contractors (A3015C – 2008-12-12)

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by the CNSC during the entire period of the Contract. If the contractor does not comply with any certification, fails to provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, the CNSC has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

6.9.2 SACC Manual Clauses

A2000C – Foreign Nationals (Canadian Contractor)

A2001C – Foreign Nationals (Foreign Contractor) - C2000C - Taxes - Foreign-based Contractor

A7017C – Replacement of Specific Individuals



6.10 Applicable Laws

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

6.11 Priority of Documents

The following documents form part of the legally binding agreement between the parties. 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 - 4007 (2010-08-16) Canada to Own Intellectual Property Rights in Foreground Information
- (c) the General Conditions 2010B (2015-09-03) – General Conditions – Professional Services (Medium Complexity)
- (d) Annex A – Statement of Work
- (e) Annex B – Basis of Payment
- (F) the contractor's bid dated _____

6.12 Intellectual Property

6.12.1 Canada to Own Intellectual Property Rights in Foreground Information (4007 – 2010-08-16)

1. Supplemental General Conditions 4007 shall form part of the contract.
2. The CNSC has determined that any intellectual property arising from the performance of the work under the contract will vest in Canada, for the following reason:
 - a) where the main purpose of the Crown procurement contract, or of the deliverables contracted for, is:
 - i. to generate knowledge and information for public dissemination

6.12.2 Publication Rights (K3053C – 2008-05-12)

1. In this section,
 - (a) "copyright work" means any work in which a copyright may subsist, produced in or as a result of performing the Contract;
 - (b) "publication" or "publish" do not include disclosure to an academic supervisor or appraiser, for the sole purpose of academic evaluation.
2. Canada grants to the contractor and to the author a royalty-free non-exclusive license to publish or have published any copyright work in the course of the normal dissemination of knowledge in the subject field. The contractor or the author must not however publish or have published any copyright work during the performance of the contract or for a period of 12 months after without obtaining before the written consent of Canada.
3. Any copyright work published by or on behalf of the contractor or the author must acknowledge that the work was performed under the contract with Canada, unless specified otherwise by Canada.

6.12.3 License to Intellectual Property Rights in Foreground Information (K3305C – 2008-05-12)



1. Subject to subsection 2, if the contractor wishes to make use of the foreground information for purposes of its commercial exploitation or further development, the contractor may make a written request for a license to the CNSC. Such a request should be made within thirty (30) working days following the performance of the work. The Contractor must give the CNSC an explanation as to why such a license is required. The CNSC must respond in writing to the request within a reasonable period of time. If the request is refused the response must provide an explanation for the refusal. If the CNSC agrees to grant the license, it will be on conditions to be negotiated between the contractor and the CNSC.
2. When the work under the contract involves the preparation of a database or other compilation using information or data supplied by the CNSC, or personal information (as this term is defined in the *Privacy Act*, R.S.C, 1985, c. P-21) collected by the contractor as part of the work, then the license referred to in subsection 1 will be restricted to the intellectual property rights in foreground information that are capable of being exploited without the use of such information or data or personal information.

6.12.4 No Right for Contractor to Sub-License (K3310C – 2008-05-12)

The contractor does not have the right to sub-license or otherwise authorize any party to exercise any of the intellectual property rights in the foreground information.

6.12.5 License to Intellectual Property Rights in Canada-owned Information (K3315C –2008-05-12)

If the contractor wishes to make use of certain Canada-owned information for purposes of the commercial exploitation or further development of the foreground information licensed to the contractor, the contractor may make a written request to the CNSC for a licence to exercise the required intellectual property rights in such Canada-owned information. The contractor must give the CNSC an explanation as to why such a license is required. The CNSC must respond in writing to any request for such a licence within a reasonable period of time. If the CNSC agrees to grant such a licence, it will be on conditions to be negotiated between the contractor and the CNSC. It is understood that those conditions may include payment of compensation to Canada.

6.13 Third-Party Information

6.13.1 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.

6.13.2 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.

6.13.3 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.

6.14 Dispute Resolution

6.14.1 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.

6.14.2 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.

6.14.3 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.

6.14.4 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.

6.14.5 The arbitration shall be in accordance with the *Commercial Arbitration Act*, R.S.C., 1985,c.17 and shall take place in Ottawa, Ontario.

6.14.6 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.

6.14.7 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.

6.14.8 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. Background

Flow accelerated corrosion (FAC) has resulted in failures of balance of plant piping systems at nuclear power plants (NPPs) including the rupture of the suction line to the main feedwater pump at the Surrey Unit 2 Pressurized Water Reactor (PWR) in the US in 1986 and the rupture of a high pressure condensate line at the Mihama Unit 3 PWR in Japan in 2004.

In a typical PWR plant, FAC primarily affects balance of plant (non-nuclear) piping systems because the nuclear piping systems are typically constructed from stainless steel or are clad with stainless steel which is not susceptible to FAC. However, CANDU nuclear piping systems are constructed of carbon steel so under certain combinations of flow conditions and water chemistry, FAC degradation of CANDU nuclear piping is plausible.

In response to the concerns over the potential for FAC related degradation or pressure boundary systems and components, the US industry, through the Electric Power Research Institute (EPRI), undertook development of a program to manage the degradation mechanism. EPRI has issued a recommended practices document and developed predictive modelling software (CHECWORKS) that have been adopted at US and Canadian NPPs to implement and manage FAC related degradation. While the Canadian NPP operators are active participants in the EPRI programs, they form a minority group with NPPs that have the potential for FAC to impact nuclear piping systems, which are subject to different operating conditions and chemistry controls than balance of plant piping. CANDU NPP operators have established additional activities related to the management of FAC through the CANDU Owner's Group, but the majority of the recommended practices employed in FAC management are based upon PWR experience.

Given that the CANDU NPPs are entering periods of extended operation and initiatives underway within the CANDU industry related to evaluations of Large Break Loss of Coolant Accident probabilities and leak before break evaluations for large diameter piping systems, an independent third-party technical review of the application of the EPRI recommended practices for FAC management to CANDU nuclear piping systems larger than 6 inches in diameter is justified.

2. Objective

To obtain an independent, third-party review of the EPRI recommended practices, discussed in the suggested documents found in the scope of work section, for the management of flow accelerate corrosion to ensure that they address factors which may contribute to FAC susceptibility of CANDU nuclear piping systems larger than 6 inches in diameter. The outcome of the review will provide useful information for CNSC staff to consider when making licensing decisions concerning aging management strategies and fitness for service evaluations for nuclear pressure boundary systems that are potentially susceptible to FAC.

3. Scope of Work

The successful contractor is to carry out a literature review of publically available documentation from EPRI and other sources to assess the applicability of the EPRI recommended practices to the management of FAC on CANDU nuclear piping systems larger than 6 inches in diameter. The review is to cover:

- A summary of significant FAC related failures experienced in the nuclear industry
- EPRI recommended practices for FAC management
- Recommended practices for FAC management published by other nuclear organizations (for example the IAEA and NEA)
- Publically available documentation related to FAC management for CANDU NPPs
- Proceedings from international conferences related to FAC management for NPPs



The contractor will prepare a final report documenting the results of the review and outlining strengths and potential areas for improvement regarding the application of the EPRI recommended practices to CANDU nuclear piping systems larger than 6 inches in diameter.

Suggested documents, as a starting point, to carry out the literature review are as follows:

- [1] EPRI Technical Report, *Recommendations for an Effective Flow-Accelerated Corrosion Program (NSAC-202L-R4)*, November 2013,
<http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=000000003002000563>
- [2] EPRI Final Report, *Effect of Hydrazine on Flow Accelerated Corrosion*, March 2005,
<http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=000000000001008208>
- [3] EPRI Final Report, *Flow-Accelerated Corrosion Investigations of Trace Chromium*, December 2003,
<http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=000000000001008047>
- [4] CODAP Topical Report, OECD-NEA, *Flow Accelerated Corrosion (FAC) of Carbon Steel and Low Alloy Steel Piping in Commercial Nuclear Power Plants*, June 2014, <https://www.oecd-nea.org/nsd/docs/2014/csni-r2014-6.pdf>

It should be noted that the contractor is to carry out a literature review that includes documents beyond these suggested documents.

4. Tasks to be Performed

- 4.1 Prepare a summary of significant FAC failures at NPPs, found through the literature review, discussing the contributing factors and potential links between the contributing factors and the operation of CANDU nuclear piping systems larger than 6 inches in diameter.
- 4.2 Prepare a summary of EPRI and other international recommended practices discussing similarities and differences considering any strengths or weaknesses that might arise from the application of those practices to CANDU nuclear piping systems and potential improvements/enhancements that should be considered.

6. Deliverables

5.1 Start-up Meeting

Date: Within 14 days of 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 shall make a presentation with the above purpose in mind.

5.2 Progress Meetings

Dates: Three (3) months after contract awarded

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.



5.3 First Formal Progress Report

The Progress Report shall 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 shall 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: Three (3) months after contract awarded

Copies: One electronic copy via email to the Project Authority

Format and style requirements: The progress reports should follow the requirements set out for the Final Report.

5.4 Draft Final Report

Due Date: Six (6) months after contract awarded

Copies: One electronic copy via email to the Project Authority

Format and style requirements: As specified in the Final Report.

5.5 Presentation

Due Date: Six (6) months after contract awarded

Location: The CNSC Head Office, Ottawa

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

5.6 Final Report

Due Date: Seven (7) months after contract awarded

Copies: One electronic copy via email to the Project Authority and one bound copy and one unbound, un-punched, single-sided reproducible master.

Format & style requirements:

To be specified by the Project Authority. The font Times New Roman 12 is to be used. Electronic copies must be provided in a format readable by Word 2003 with minor formatting changes. 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.



ANNEX B – BASIS OF PAYMENT

1.0 Basis of Payment – Firm Price – Deliverables (H1001C)

1.1 Deliverable Schedule

In consideration of the contractor satisfactorily completing all of its obligations under the contract, the contractor will be paid the following firm all inclusive price in accordance with the following deliverable schedule. FOB destination, Customs duties are included and Applicable Taxes are extra.

deliverable	Delivery date	Firm price
On delivery of First Formal Progress Report (Task 5.3)		25%
On completion of Draft Final Report (Task 5.4)		25%
On delivery of Presentation (Task 5.5)		25%
On delivery of final report (Task 5.6)		25%
Total firm price		\$

1.2 Limitation of Price (C6000C – 2011-05-16)

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.