



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving Public Works and Government
Services Canada/Réception des soumissions Travaux
publics et Services gouvernementaux Canada
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 1T3
Nova Scotia
Bid Fax: (902) 496-5016

SOLICITATION AMENDMENT

MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Atlantic Region Acquisitions/Région de l'Atlantique
Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9
Nova Scot

Title - Sujet Neptune Array	
Solicitation No. - N° de l'invitation W7707-175892/A	Amendment No. - N° modif. 003
Client Reference No. - N° de référence du client W7707-17-5892	Date 2017-01-17
GETS Reference No. - N° de référence de SEAG PW-\$HAL-309-9997	
File No. - N° de dossier HAL-6-77077 (309)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-02-17	
Time Zone Fuseau horaire Atlantic Standard Time AST	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: MacNeil, Blaine A.	Buyer Id - Id de l'acheteur hal309
Telephone No. - N° de téléphone (902) 496-5180 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Amendment #3

Please see the attached (1) bidder Questions and Responses and (2) the revised Annex B “Evaluation Criteria” that completely replaces the original tender version.

Please note that the closing date has been extended until 17 February 2017.

All other terms and conditions remain unchanged.

QUESTION 1A:

“Para 4.1.1.2.1 Bidder Experience” needs to be relaxed so that experience and abilities of a Contracted project team or system integrator is considered – as opposed to the affiliation with a particular company or organization – or whether components are procured and integrated in-house;

ANSWER 1A:

Please see Solicitation Amendment 02 containing the revision to this clause.

QUESTION 1B:

Mandatory Evaluation Criteria be changed from “Contractor” to “Contracted project team”;

ANSWER 1B:

Please find attached the amended Annex B Evaluation Criteria and Selection Method; please note the wording has changed from “Contractor” to the Bidder, joint venture or subcontractor(s).

QUESTION 2A:

Batteries: Based on the Sensor Array (SA) and Wireless Access Gateway (WAG) requirements it is expected to provide sufficient battery to operate the WAG and SA during the entire deployment cycle. Can you provide an estimate of the expected duration of the deployment such as winch payout rate? This information would be helpful in sizing the WAG batteries properly.

ANSWER 2A:

It is estimated for up to 8 hours duration for the deployment.

QUESTION 2B:

Documentation: Is contractor format acceptable for all deliverable drawings and documents to be provided?

ANSWER 2B:

Yes, contractor format will be accepted for all deliverable drawings and documents to be provided.

QUESTION 2C:

Testing: Is there a test requirements document? The SOW indicates pull testing, temperature, and pressure test are required to be repeated 3 times. Should we assume these test are all operational and that there are no non-operational survivability test? Are there min and max temperature requirements and required dwell times for the environmental test? Is the max operational and survival depth 2800 meters?

ANSWER 2C:

There is no testing documentation at this time. This will be discussed and developed with the Successful Bidder.

Past arrays have been treated to a series of tests that were repeated several times. Generally, the tests followed this sequence—pull/strain, pressure cycling, and then freeze/warm. All of these will be difficult to do with a 1600+ m long array. Testing will be a developing effort and depends on the array design and number of sections as well. Max operational depth is 2800 m.

QUESTION 2D:

Travel: Are all meetings required to be in person or are interactive multimedia meetings like Go-To-Meeting acceptable for some?

In addition we request consideration be given to a further extension due to the complexity of the requirement. We therefore ask for the submission date to be 3 February 2017.

ANSWER 2D:

Travel: Yes, teleconference and video-conference meetings are acceptable

Extension: Please see Solicitation Amendment 02 regarding the previously advertised extension date.

QUESTION 3A:

In section 4.2 Basis of Selection, item 1.b - it states to be declared responsive a bid must "meet all mandatory technical evaluation criteria"

Does "technical evaluation criteria" refer to the table of Specifications and Criteria starting on page 12 of Annex A: Technical Specification in the Statement of Work?

If so, does this mean that to be compliant, the bidder must offer a solution that meets ALL of the "must" items in the table of specifications/criteria?

ANSWER 3A:

The Mandatory Evaluation Criteria that will be assessed and utilized to evaluate submitted proposals are outlined in Section 1. Mandatory Evaluation Criteria within Annex B of the Solicitation.

QUESTION 3B:

Can you please confirm that the indicated budget (Para 2.6, page 6 of 23) is exclusive of taxes.

ANSWER 3B:

The stipulated budget (Para 2.6, page 6 of 23) is inclusive of taxes.

QUESTION 3C:

The delivery date requested in Para 6.2.1 "On or before 2017-05-01" on page 7 of 22 in Annex A "Statement of Work" doesn't seem reasonable considering the amount of work required for this deliverable. Is it possible for this date to be extended?

ANSWER 3C:

Please see Solicitation Amendment 01 regarding the previously amended delivery dates.

QUESTION 4A:

Annex A: Technical specification, Specification #1, part e, "Max Unclipped Tonal – 178 dB at 0 dB post-amp gain. Exact level TBD by design. Must allow for recording data at the noise floor limit (and below)." To what is the 178 dB related? Is it relative to 1uPa at the input? If it is related to 1 uPa at the input then Specification #1 parts c, d, and e are in conflict.

ANSWER 4A:

The maximum level is 168 dB not 178 dB as indicated in the above question. The 168 dB was intended to be 168 dB/1uPa at the input to the hydrophone. In other words the maximum sound pressure level before clipping.

Part c refers to the minimum desired level and is therefore not in conflict with the max level. The contractor needs to provide an adjustable gain. The 168 dB down to the noise floor (e.g., $168-30=138$ dB) is likely greater than the dynamic range at fixed gain, but you have to assume that the loudest and quietest sounds don't occur simultaneously. If it is set up for the quiet levels, then it could be overloaded by a sudden onset loud noise.

Part d – same as above. $168-105 = 63$, this implies that it needs to arrange gain/attenuation to provide about 35 dB of adjustable range. It is expected that much of the time, it could operate without changing gain, but there will be times, when the array would need to work in the presence of loud noise sources.

QUESTION 4B:

For the low-frequency hydrophones the integrated noise floor from 5 Hz to 1400 Hz is 65 dB re uPa. With a maximum unclipped level requirement of 178 dB re uPa this implies a dynamic range of 113 dB while the system specifications require 105 dB. Would PWGSC please confirm the 105 dB dynamic range specification for the low frequency hydrophone as stated in specification 1, pages 12 and 13, (Sensor Array: Low-Frequency Digital Hydrophones)?

ANSWER 4B:

Yes, that is correct; a 113-dB dynamic range is desired, but a 105 dB range is acceptable. Note also that the max level is 168, not 178 dB, implying 103 dB dynamic range will suffice.

QUESTION 4C:

Annex A: Technical specification, Specification #8, part f, the "Max Unclipped receive level: 178 dB//1uPa/ $\sqrt{\text{Hz}}$ ". Should this unit be dB//1uPa? Tones do not have a bandwidth and are not specified as / $\sqrt{\text{Hz}}$.

ANSWER 4C:

Yes, that is correct. Please amend to read dB//1uPa. Note also that the max level is 168 dB, not 178.

QUESTION 4D:

The text description of the low-frequency calls out 96 hydrophones, but in Annex B – Suggested Hydrophone Spacing and Layout there are 96 hydrophones; the various low-frequency apertures require 94 hydrophones, and there are 3 high frequency hydrophones. The centre hydrophone is shown as shared between the low frequency apertures and the middle high frequency hydrophone. Does the low-frequency array consist of 94 or 96 hydrophones?

ANSWER 4D:

96 h/p's is the desired total. At least three phones must have wide-band capability. The intent is to have at least three wide-band hydrophones and at least 94 LF hydrophones. It may be that in the Bidder's design there is a shared hydrophone or not. The design has been left up to the Bidder. As the section is titled, this is just a suggestion for the layout; improvements proposed will be considered however, will not have any bearing on scoring.

QUESTION 4E:

Annex B shows the center hydrophone as shared between the low-frequency array and the mid high frequency position. Is it required to use one hydrophone for both the low-frequency array and as the middle high frequency hydrophone, or can separate hydrophones be used for the low-frequency array and the middle high frequency hydrophone?

ANSWER 4E:

More than one hydrophone can be utilized to allow us to detect and localize relatively nearby noise

sources with the wide-band h/p's and detect more distant LF noise sources with the main array.

QUESTION 4F:

What data/information are DRDC hoping to communicate to the SS from the WAG when the ROV submerges during the array deployment? It is not practical to wirelessly transmit the full bandwidth of the array through the water.

ANSWER 4F:

There is no intention to use wireless underwater communications at all. The Wireless Access Gateway (WAG) used in Northern Watch was just an example of a system providing access to the array during deployment.

QUESTION 4G:

In Annex A, Specification # 21, what is meant by "The acoustic channels will also need to be pre-processed, perhaps to estimate the total noise power and filter the response time, and then displayed to the operator." As it pertains to using the WAG during deployment?

ANSWER 4G:

This is referring to the data provided to the operator during the array deployment. The intention is that data from the array will be processed during the deployment in near real-time to provide an indication of what is happening to the array. This includes data from acoustic sensors, array orientation, strain, and similar sensors. For example, depth sensors could indicate when the array is on the bottom or in the water. Acoustic signal intensity from individual hydrophones could also reveal issues with array drag, cable strumming, and whether or not the hydrophone is on the bottom.

EVALUATION CRITERIA

1. MANDATORY EVALUATION CRITERIA

In their proposals, bidders must demonstrate they meet the following mandatory criteria. Failure to meet any of the mandatory criteria will render the bid non-compliant and it will be given no further consideration.

	CRITERIA	MET	NOT MET
M1	The Bidder, joint venture or subcontractor(s) must have demonstrated experience <u>designing</u> underwater acoustic surveillance arrays (Contractor must provide, at a minimum, one example using a detailed project description of a contract completed within the last 72 months).		
M2	The Bidder, joint venture or subcontractor(s) must have demonstrated experience <u>building</u> underwater acoustic surveillance arrays (Contractor must provide, at a minimum, one example using a detailed project description of a contract completed within the last 72 months).		
M3	The Bidder, joint venture or subcontractor(s) must have demonstrated experience <u>developing software</u> for underwater acoustic surveillance arrays (Contractor must provide, at a minimum, one example using a detailed project description of a contract completed within the last 72 months).		

2. POINT-RATED EVALUATION CRITERIA

	POINT-RATED EVALUATION CRITERIA	Minimum	Maximum
P1	The Bidder, joint venture or subcontractor(s) should have demonstrated company experience working on similar size and complexity projects, designing and building underwater acoustic surveillance arrays. Examples provided must relate to clearly distinct projects. Point Rating: 1-2 Projects (10 Points); 3-5 Projects (15 Points); and Greater than 5 Projects (20 Points).	10	20
P2	The Bidder, joint venture or subcontractor(s) should submit a detailed work plan with the Bid Proposal that: <ol style="list-style-type: none"> 1. demonstrates a clear understanding of the contract requirements; 2. proposes a reasonable plan to address the requirements; and 3. includes a discussion of risks and risk mitigations. Point Rating: No work plan provided (0 Points); Work plan shows a good understanding of the requirements, a good work plan and a good discussion of risks and mitigations (20 Points); Work plan shows a very good understanding of the requirements, a very good work plan and a very good discussion of risks and mitigations (25 Points); and Work plan shows an excellent understanding of the requirements, an excellent work plan and an excellent discussion of risks and mitigations (30 Points).	20	30

EVALUATION CRITERIA

P3	<p>The Bidder, joint venture or subcontractor(s) should submit a configuration management plan with the Bid Proposal that describes how the configuration of the array components (software and hardware) will be managed.</p> <p>Point Rating: No Configuration Plan provided (0 Points); A reasonable Configuration Plan provided (5 Points); and A reasonable Configuration Plan provided, which has been used for at least one previous project (10 Points).</p>	5	10
P4	<p>The Bidder should demonstrate that the proposed resource as the Project Manager has a minimum of 3 years of Project Management experience in the last 6 years.</p> <p>Point Rating: Less than 3 years Project Management experience (0 Points); 3-10 years Project Management experience (5 Points); and Greater than 10 years Project Management experience (10 Points).</p>	5	10
P5	<p>The Bidder should demonstrate that the proposed resource(s) as the Field Service Representative(s) have a minimum of 2 previous cumulative experiences in providing support to an underwater array deployment.</p> <p>Point Rating: Less than 2 previous deployments (0 Points); 2-5 previous deployments (5 Points); and Greater than 5 previous deployments (10 Points).</p>	5	10
P6	<p>The Bidder should demonstrate that the proposed resource(s) as the Electrical Engineer(s) must have relevant, demonstrated, cumulative experience with the design, build and troubleshooting of both analogue and digital electrical systems.</p> <p>Point Rating: No analogue or digital experience (0 Points); Experience with either analogue or digital electrical systems (5 Points); and Experience with analogue and digital electrical systems (10 Points).</p>	5	10
P7	<p>The Bidder should demonstrate that the proposed resource(s) as the Computer Programmer(s) have cumulative experience with embedded systems and software application development.</p> <p>Point Rating: No experience with embedded systems and software application development (0 Points); Experience with either embedded systems or software application development (5 Points); and Experience with embedded systems and software application development (10 Points).</p>	5	10

EVALUATION CRITERIA

TOTAL

55

100

3. SELECTION METHODOLOGY

☒ **Highest-rated Responsive Proposal within a Stipulated Maximum Budget**