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TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**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
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Issuing Office - Bureau de distribution
Science Procurement Directorate/Direction de
l'acquisition de travaux scientifiques
Terrasses de la Chaudière, 4th Flo
10 Wellington Street
Gatineau
Quebec
K1A 0S5

Title - Sujet LEAP - Lunar Rover Phase A	
Solicitation No. - N° de l'invitation 9F052-200303/B	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client 20200303	Date 2021-07-14
GETS Reference No. - N° de référence de SEAG PW-\$\$\$ST-048-39535	
File No. - N° de dossier 048st.9F052-200303	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2021-08-03 Heure Avancée de l'Est HAE	
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: Abbasi, Sameer Ali	Buyer Id - Id de l'acheteur 048st
Telephone No. - N° de téléphone (873) 354-4921 ()	FAX No. - N° de FAX (819) 956-2675
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

This amendment is raised to address the following:

- To respond to questions received during the solicitation period; and
- To revise the solicitation accordingly, as applicable.

Questions and Answers

Q21. The RFP described up to two (2) Phase A contracts for \$1.8M Canadian Dollars (CAD) (Applicable Taxes extra) for each of the phase A studies. The context implies this is from CSA for the Canadian partner. Does NASA have an expectation (or cap) for the phase A for the US partner on each of the two selected mission concepts?

A21. As indicated in the amended Section 1.2.1 of the bid solicitation below, "The maximum funding available for the U.S. scientific instrument(s) is \$5,000,000.00 U.S. Dollars (USD) for Phases A, B, C and D. This disclosure does not commit NASA to pay the maximum funding available". Although the bid solicitation does not include a specified maximum funding for the Phase A work, NASA's expectation is that such work would typically be approximately 10% of the maximum funding available. This response does not commit NASA to pay the maximum funding available nor does it require bidders to submit a bid for Phase A at the typical value described.

Q22. Please see below questions related to this bid solicitation:

1. CSA-LEAP-SOW-0002 6.1 Engineering Interface

Could you please help clarify the responsibility for the lander deployment element? In second paragraph of 6.1, it indicates "For the purpose of estimating the work and level of interfaces, it should be considered that the CLPS lander is responsible at this point to develop the actual interfacing hardware to host and deliver the rover (egress) to the Moon".

However, in Table 3-2 - LRM Program and Interface Requirements, LSM-MR-PR-0030 states that the LRMLIS is part of the Contractor's responsibility, "LRM Lander Interface Segment (LRMLIS) that represents the interfaces between the lander and the rover (e.g. ramp, umbilical, etc.).

2. CSA-LEAP-SOW-0002 Section 1.1 Mission Context, Figure 1-1

Figure 1-1 states that the Communications Band is to be 1-250 kbps S/X for direct to Earth (DTE) and 1-1000 kbps UHF/S/X for relay.

However, requirements LRM-MR-FCT-0060 and LRM-MR-FCT-0050 in "CSA-LEAP-RD-0001 Mission Requirements_revIR" ([AD-08] of the SOW) state that the data bandwidths are to be 1 kbps uplink and 5 kbps downlink for DTE and no more than 250 kbps for relay.

3. Will there be additional funding available for HQP trainee (student) development separate from these contracts or will HQP trainee (student) development need to be costed within these contracts.

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A22. Please see below responses to Q22:

1. The lander provider is responsible to implement the hardware that will accommodate the rover on its lander, for example providing a ramp, but the contractor is responsible to define what kind of interface is required to fulfill this need, for example request a ramp if required and the contractor is also responsible to provide the attachment point required on the rover to comply with the lander I/F. All interfaces required by the contractor for the rover are to be specified by the contractor to inform the lander provider.
2. The mission requirements should take precedence as a starting point. These define the minimum requirements, if better performance such as reported in figure 1-1 of the Statement of Work can be achieved, the contractor should study and provide inputs as part of Phase A to refine the requirements and provided the design concept to meet these with different options.
3. As specified at Section 4.1.3.1 of the Request for Proposal, "The Bidder must submit a total firm, all-inclusive price for the Work to be performed under Phase A in cells (A) and (B) of the Basis of Payment at Annex B.". In Annex B, Basis of Payment, it is specified that "The total firm, all-inclusive price must be provided by the Bidder in their Financial bid and should include the price breakdown as requested in Section 3.1.1.1 of this bid solicitation. The firm amount per milestone will be calculated by Canada based on the formula detailed in the table above and will be incorporated into the resultant contract.". The Bidder should thus consider all direct and indirect costs required to perform the Work and ensure that these costs are reflected in the total firm, all-inclusive price.

This is specific funding for HQP trainee (student) development. Any HQP training costs associated with the instrument development must be costed as part of this current RFP as described above. Should the CSA implement any related grant programs, the selection and implementation of such a process would be entirely separate from this RFP.

Q23. Please advise where bidders are to submit their bids in response to this bid solicitation.

A23. Part 2 (Bidder Instructions) of this bid solicitation provide bidders with instructions on where to submit their bid.

Please refer to Section 2.2 Submission of Bids of the bid solicitation:

"Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit via epost Connect by the date, time and place indicated in the bid solicitation.

For bidders needing to register with epost Connect, the email address is:

tpsgc.dgareceptiondessoumissions-abbidreceiving.pwgsc@tpsgc-pwgsc.gc.ca

Interested bidders must register a few days prior to solicitation closing date.

Bids will not be accepted if emailed directly to this email address. This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions 2003, or to send bids through an epost Connect message if the Bidder is using its own licensing agreement for epost Connect.

Due to the nature of the bid solicitation, bids transmitted by facsimile or electronic mail to PWGSC will not be accepted."

Please refer to the bid solicitation for details.

Q24. With reference to Canadian Rover RFP for Phase A, we have observed the following issues:

(1) It appears that CSA/PWGSC has already pre-selected companies in mind and thus this is not a public procurement tender. It has been stated that Bidder must have Canadian Qualified [See Section 8.1 HARDWARE b) below] instrument and it is clear that only companies having qualified instruments or have CAD qualified instrument can bid and thus completely eliminating any other potential bidders with new innovative instruments providers. If CSA has qualified instrument that should be customer furnished equipment (CFE) (see below) should not be the bidder to scout for the instrument. If CSA already has certified instrument, they should supply/provide to the bidder. Otherwise, it is considered as pre selected companies with previous agreements in place and not an open public tender. We have approached most of the university and R&D institutes and they confirmed to have exclusive agreement with some manufacturer in Canada. Thus leaving no room for our organization or some other new bidders to bid.

Statement of Work, Section 8.1 HARDWARE

b) At least 1 certified Canadian Flight science instrument integrated onto the rover

(2) Second point being is that for such a complex program, only 4-5 weeks extremely short period provided. We request to extend the submission date provide some clarification is provided on point 1 above.

(3) 1 Flight certified Rover

Can you please clarify the certified means, does it mean have flight heritage/already flown or certified to fly/Qualify? If so, by CSA or any other agency as well such as NASA/ESA?

A24. Please see below responses to Q24:

(1) With regards to this bid solicitation, there is no requirement for a Canadian Qualified instrument in order to submit a bid nor have any suppliers been pre-selected for this requirements. All bidders are permitted to submit a bid in response to this bid solicitation, provided the bid meets the requirements of this bid solicitation. All bidders are subject to the same evaluation criteria identified in Part 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION.

The Statement of Work indicates at Section 1.3 that "At the end of this phase, the final baselined system requirements and the advanced concept must be completely developed and delivered." An "advanced concept" implies that the engineering models encapsulate a design capable of being built, tested and qualified in time for the predetermined launch window". As such, the bid solicitation does not require bidders to have a qualified instrument in order to submit a bid. However, the Contractor will be required to completely develop and deliver the final baselined system requirements and the advance concept by the end of Phase A.

(2) Please refer to Amendment No. 04. The bid solicitation closing date was extended to August 3, 2021.

(3) The word 'certified' in the SOW section 8.1 & 8.2 implies that both the Flight Hardware and Software delivered in compliance to CSA requirements, such that they can be commissioned in space or upon landing on the Moon.

Q25. Due to the complexity of the solicitation, our organization is requesting a two (2) weeks extension.

A25. Please refer to Amendment No. 04. The bid solicitation closing date was extended to August 3, 2021.

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Q26. For submitting a bid, are there any forms I need to complete? I have not submitted and bids before but with my experience with other proposals, there are always forms with different sections to complete. For this bid, referring to all documents, I cannot find any forms. Can you please guide me on this and let me know the process, the questions and any pertinent information I can benefit from.

A26. Please see the response to question no. 01 posted under Amendment No. 01.

Q27. Please see below questions related to this bid solicitation:

(1) Overall, a number of components/systems to be used on the final rover are commercially available in some capacity. Is there an interest in using some commercially available vs some custom components? (Subject to Canadian content requirements of course). Alternatively, is the goal to custom design the entire unit, except for the science payloads?

A27. Please see below responses to Q27:

(1) The goal is not to design an entirely custom solution. Trade-off studies should be done as part of the proposal elaboration stage in order to select the best options between commercial or custom components/systems, the idea being to maximize efficiency within the constraints. Some commercial components can be used if there is a clear advantage for doing so *and there is a path to qualification*, subject to Canadian content requirements, as mentioned.

Solicitation Revisions

1. At Cover Page, under Solicitation Closes on:

DELETE: 2021-07-26

INSERT: 2021-08-03

2. At page 3, Section 1.2.1, fourth paragraph in the bid solicitation:

DELETE: The intent of this RFP is to award up to two (2) Phase A contracts with a maximum funding of \$1,800,000.00 (Applicable Taxes extra) for each contract. The Phase A contract is for the development of the system requirements and concept designs for the rover and its Canadian instrument suite, and includes the Work related to the integration of the U.S. scientific instrument described as optional goods and/or optional services that will be required to support the portion of the Work to be strictly completed by the proposed U.S. scientific instrument(s) provider as specified in the Bidder's bid. The portion of the Work to be strictly completed by the proposed U.S. scientific instrument(s) provider as specified in the Bidder's bid will be put under contract and funded directly by the National Aeronautics and Space Administration (NASA). As such, that cost is excluded from the maximum funding specified above. In the event that the total maximum funding available of \$3,600,00.00 (Applicable Taxes extra) for two contracts is not exceeded, an additional contract(s) may be awarded as specified in Part 4 - Evaluation Procedures and Basis of Selection of this bid solicitation. The planned budget for the U.S. scientific instrument(s) is \$5,000,000.00 US Dollars (USD) for Phases A, B, C and D. This disclosure does not commit NASA to pay the maximum funding available.

INSERT: The intent of this RFP is to award up to two (2) Phase A contracts with a maximum funding of \$1,800,000.00 (Applicable Taxes extra) for each contract. The Phase A contract is for the development of the system requirements and concept designs for the rover and its Canadian instrument suite, and includes the Work related to the integration of the U.S. scientific instrument described as optional goods and/or optional services that will be required to support the portion of the Work to be strictly completed by the proposed U.S. scientific instrument(s) provider as specified in the Bidder's bid. The portion of the Work to be strictly completed by the proposed U.S. scientific instrument(s) provider as specified in the Bidder's bid will be put under contract and funded directly by the National Aeronautics and Space Administration (NASA). As such, that cost is excluded from the maximum funding specified above. In the event that the total maximum funding available of \$3,600,00.00 (Applicable Taxes extra) for two contracts is not exceeded, an additional contract(s) may be awarded as specified in Part 4 - Evaluation Procedures and Basis of Selection of this bid solicitation. The maximum funding available for the U.S. scientific instrument(s) is \$5,000,000.00 US Dollars (USD) for Phases A, B, C and D. This disclosure does not commit NASA to pay the maximum funding available.

3. At page 16, Section 4.1.3.1 Mandatory Financial Criteria (FM) in the bid solicitation:

DELETE:

4.1.3.1.2 FM2 - The maximum funding available for each Contract resulting from the bid solicitation is \$1,800,000.00 (Applicable Taxes extra) for the Work under Phase A, including the optional good and/or optional services. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available. The portion of the Work to be strictly completed by the proposed U.S. scientific instrument(s) provider as specified in the Bidder's bid will be put under contract and funded directly by NASA. As such, that cost is excluded from the maximum funding specified above.

INSERT:

4.1.3.1.2 FM2 - The maximum funding available for each Contract resulting from the bid solicitation is \$1,800,000.00 (Applicable Taxes extra) for the Work under Phase A, including the optional good and/or optional services. Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available. The portion of the Work to be strictly completed by the proposed U.S. scientific instrument(s) provider as specified in the SOW will be put under contract and funded directly by NASA. As such, that cost is excluded from the maximum funding specified above.

4.1.3.1.3 FM3 - The LCC provided in the Bidder's bid for the U.S. science instrument(s) must not exceed \$5,000,00.00 US Dollars (USD) for Phase A, B, C and D. Bids containing LCC valued in excess of this amount will be considered non-responsive. This disclosure does not commit NASA to pay the maximum funding available. The portion of the Work that is to be strictly completed by the proposed Canadian provider as specified in the SOW will be put under contract and funded directly by Canada. As such, that cost is excluded from the maximum funding specified above.

4. At page 20, Section 5.2.3.4 Funding certification for Phases A, B, C and D in the bid solicitation:

DELETE: The Bidder certifies, acknowledges and agrees that:

() the maximum funding for Phases A, B, C and D for the LRM, excluding the U.S. scientific instrument(s), will

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be \$45M Canadian Dollars (CAD), Applicable Taxes extra, inclusive of the two contracts totalling \$3.6M Canadian Dollars (CAD) (maximum \$1.8M CAD for each contract), Applicable Taxes extra, subject to the provisions of Section 4.2.1 of this bid solicitation for the Phase A Work, or unless specified otherwise by the Contracting Authority at any Phase of the project. This disclosure does not commit Canada to pay the maximum funding available.

() the funding available for Phases A, B, C and D for the U.S. scientific instrument(s) will be \$ 5M U.S. Dollars (USD). Any request for funding increase at any Phase of the project must be justified by the U.S. scientific instrument(s) provider and approved by a NASA representative (to be identified). This disclosure does not commit NASA to pay the maximum funding available.

Bidder signature

Date

INSERT: The Bidder certifies, acknowledges and agrees that:

() the maximum funding available for Phases A, B, C and D for the LRM, excluding the U.S. scientific instrument(s), will be \$45M Canadian Dollars (CAD), Applicable Taxes extra, inclusive of the two contracts totalling \$3.6M Canadian Dollars (CAD) (maximum \$1.8M CAD for each contract), Applicable Taxes extra, subject to the provisions of Section 4.2.1 of this bid solicitation for the Phase A Work, or unless specified otherwise by the Contracting Authority at any Phase of the project. This disclosure does not commit Canada to pay the maximum funding available.

() the maximum funding available for Phases A, B, C and D for the U.S. scientific instrument(s) will be \$ 5M U.S. Dollars (USD). Any request for funding increase at any Phase of the project must be justified by the U.S. scientific instrument(s) provider and approved by a NASA representative (to be identified). This disclosure does not commit NASA to pay the maximum funding available.

Bidder signature

Date

5. At page 15, Section 3.2.4 Project Cost Estimate, seventh paragraph in Annex A Statement of Work in the bid solicitation:

DELETE: The planned budget for the U.S. scientific instrument(s) is \$5,000,000.00 US Dollars (USD), for Phases A, B, C and D.

INSERT: The maximum funding available for the U.S. scientific instrument(s) is \$5,000,000.00 US Dollars (USD), for Phases A, B, C and D.

6. At page 12, Section 4.2.3.2.6. Project Management Approach, sixth paragraph in Attachment 1 to Part 3 Technical and Managerial Bid Preparation Instructions in the bid solicitation:

DELETE: The planned budget for the U.S. scientific instrument(s) is \$5,000,000.00 US Dollars (USD) for Phases A, B, C and D.

INSERT: The maximum funding available for the U.S. scientific instrument(s) is \$5,000,000.00 US Dollars (USD) for Phases A, B, C and D.

7. At page 2, A16, in Amendment No. 003 of the bid solicitation:

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DELETE: As specified in Section 3.1.1.1 of the bid solicitation, "... bidders are requested to provide the cost estimates for the Rough Order of Magnitude (ROM) Life-Cycle Costs (LCC) segregated for Phases A to E, including the U.S. science instrument(s) as a separate WBS element, in accordance with the format specified in Table 3-1 TEMPLATE FOR COST BREAKDOWN BY WBS of Annex A - Statement of Work as shown below". Bidders are also requested to provide the cost estimates for Phase F only for the U.S. instrument(s) in their bid. Phases A-D should be under the \$5M USD cost cap as indicated in the solicitation.

INSERT: As specified in Section 3.1.1.1 of the bid solicitation, "... bidders are requested to provide the cost estimates for the Rough Order of Magnitude (ROM) Life-Cycle Costs (LCC) segregated for Phases A to E, including the U.S. science instrument(s) as a separate WBS element, in accordance with the format specified in Table 3-1 TEMPLATE FOR COST BREAKDOWN BY WBS of Annex A - Statement of Work as shown below". Bidders are also requested to provide the cost estimates for Phase F only for the U.S. instrument(s) in their bid. Phases A-D for the U.S. instrument(s) must be under the \$5M USD cost cap as indicated in the solicitation.

8. At page 3, A18, in Amendment No. 003 of the bid solicitation:

DELETE: Certified costs are not required for this solicitation. As specified in Section 3.1.1.1 of the bid solicitation, we do request cost data such as a detailed breakout of costs and budget, but not certified cost data.

INSERT: Certified costs are not required for this solicitation. As specified in Section 3.1.1.1 of the bid solicitation and noted in the response to Q16, bidders are requested to provide cost estimates for the Rough Order of Magnitude (ROM) Life-Cycle Costs (LCC) segregated for Phases A-E (as well as Phase F for the U.S. payload) in accordance with the format specified in Table 3-1 TEMPLATE FOR COST BREAKDOWN BY WBS of Annex A - Statement of Work.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME