



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
Government of Canada Building
101 - 22nd Street East, Suite 110
Saskatoon
Sask.
S7K 0E1
Bid Fax: (306) 975-5397

REQUEST FOR PROPOSAL DEMANDE DE PROPOSITION

**Proposal To: Public Works and Government
Services Canada**

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, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

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

Issuing Office - Bureau de distribution

Public Works and Government Services Canada/Réception
des soumissions Travaux publics et Services
gouvernementaux Canada
Government of Canada Building
101 - 22nd Street East
Suite 110
Saskatoon
Saskatche
S7K 0E1

Title - Sujet Turnkey Dual Laser Source - Alberta	
Solicitation No. - N° de l'invitation W7702-165772/A	Date 2016-01-25
Client Reference No. - N° de référence du client W7702-165772	
GETS Reference No. - N° de référence de SEAG PW-\$STN-191-4857	
File No. - N° de dossier STN-5-38058 (191)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-03-07	Time Zone Fuseau horaire Central Standard Time CST
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: Gerstmar, Denise	Buyer Id - Id de l'acheteur stn191
Telephone No. - N° de téléphone (306) 241-1018 ()	FAX No. - N° de FAX (306) 975-5397
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Department of National Defence Defence R & D Canada Suffield Building 560 Receiving Ralston AB T0J 2N0	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	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

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PART 1 - GENERAL INFORMATION

1.1 Requirement

The requirement is detailed under Article 6.2 of the resulting contract clauses.

1.2 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.3 Trade Agreements

The requirement is subject to the provisions of the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

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

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2015-07-03), Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 120 days

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

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

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

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (one (1) hard copies)

Section II: Financial Bid (one (1) hard copies)

Section III: Certifications (one (1) hard copies)

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

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

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

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

3.1.1 Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

- Must meet all of the requirements in Annex A – Requirements
- Brochure or technical literature to cross reference technical mandatory criteria in Annex A.

4.1.2 Financial Evaluation

SACC Manual Clause A0222T (2014-06-26), Evaluation of Price

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract

SACC Manual Clause A0031T (2010-08-16), Basis of Selection - Mandatory Technical Criteria

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

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

5.1.1 Declaration of Convicted Offences

As applicable, pursuant to subsection Declaration of Convicted Offences of section 01 of the Standard Instructions, the Bidder must provide with its bid, a completed [Declaration Form](http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>), to be given further consideration in the procurement process.

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5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – List of Names

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.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

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

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list at the time of contract award.

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PART 6 - RESULTING CONTRACT CLAUSES

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

6.1 Security Requirements

There is no security requirement applicable to this Contract.

6.2 Requirement

The Contractor must provide one (1) turnkey continuous wave (CW) dual laser system for the customized assembly of a Photon Doppler Velocimetry (PDV) system in accordance with the Requirement at Annex "A".

6.3 Standard Clauses and Conditions

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

6.3.1 General Conditions

2010A (2015-09-03), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Delivery Date

Although delivery is requested on or before 31 March 2016, the best delivery date offered is:

_____.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Denise Gerstmar
Title: Procurement Officer
Public Works and Government Services Canada
Acquisitions Branch

Directorate: Ouest
Address: 201 – 1800 11th Avenue, Regina SK S4P 0H8

Telephone: 306-241-1018
Facsimile: 306-975-5397
E-mail address: denise.gerstmar@pwgsc-tpsgc.gc.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.

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6.5.2 Technical Authority

The Technical Authority for the Contract is:

To be determined

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

6.5.3 Contractor's Representative

Name: _____

Title: _____

Company: _____

Address: _____

Telephone: _____

Facsimile: _____

E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment

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

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

6.6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16), Limitation of Price

6.6.3 Single Payment

SACC Manual clause H1000C (2008-05-12), Single Payment

6.6.4 SACC Manual Clauses

C2000C (2007-11-30), Taxes – Foreign-based Contractor

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6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Certifications

6.8.1 Compliance

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

6.9 Applicable Laws

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

6.10 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2010A (2015-09-03), Goods (Medium Complexity);
- (c) Annex A, Requirement;
- (d) Annex B, Basis of Payment);
- (e) the Contractor's bid dated _____ (insert date of bid)

6.11 Insurance

SACC Manual clause G1005C (2008-05-12), Insurance

ANNEX "A" REQUIREMENT

DRDC Suffield Centre has a requirement for one (1) turnkey continuous wave (CW) dual laser system for the customized assembly of a Photon Doppler Velocimetry (PDV) system. This requirement is limited to 2 subsystems: 1) a primary (i.e., transmitter) source comprising both seed laser and optical amplifier, 2) a secondary (i.e., leapfrog) laser source. Incorporation of this turnkey dual laser system into the customized PDV assembly will be the responsibility of the end user.

ACRONYMS

$\sqrt{\text{Hz}}$	Square root Hz
CW	Continuous Wave
dBc/Hz	decibel relative to the carrier per Hz
DFB	Distributed FeedBack
DRDC	Defence Research and Development Canada
FC/APC	Ferrule Connector / Angled Physical Contact
GHz	Gigahertz (10^9 Hz)
Hz	Hertz (1 cycle per second)
kHz	kilohertz (10^3 Hz)
km	kilometer (10^3 m)
LED	Light Emitting Diode
m	meter
Max	Maximum
MHz	Megahertz (10^6 Hz)
MHz/°C	Megahertz per degree Celsius
Min or min	Minimum
mW	milliWatt (10^{-3} W)
nm	nanometer (10^{-9} m)
PC	Personal Computer
PDV	Photon Doppler Velocimetry
pm	picometer (10^{-12} m)
RIN	Relative Intensity Noise
RMS	Root Mean Squared
S/N	Signal-to-Noise ratio
SOR	Statement of Requirement
TA	Technical Authority
USB	Universal Serial Bus
VAC	Volt(s) of Alternating Current
W	Watt (joule per second)
μrad	microrad or microradian (10^{-6} radian)
μsec	microsec or microsecond (10^{-6} second)

The Contractor must provide the requirement with the following specifications:

Item	Specifications	Value	Meets/ Does Not Meet (Bidder must indicate)	Cross Reference: In this column, Bidders must cross reference where this technical specification is indicated in their proposal
1	Overall description	Distributed feedback (DFB), continuous wave (CW), mode hop free, low noise, inherently single frequency fibre lasers (2 units) but tuneable over a limited range of wavelengths for use under laboratory conditions. This system will consist of two lasers: the primary laser with amplified and adjustable output power, and leapfrog laser with fixed output power. For the purpose of modular repair or replacement, the contractor will deliver a modular system whereby both lasers (2 units) and optical amplifier (1 unit) can be physically disconnected and separated from one another by the end user.		
2	Centre wavelength for both lasers (factory set point)	1550.0 – 1550.2nm (nominal); the contractor must include a test sheet showing the measured factory value		
3	Wavelength stability under ambient temperature after 5 min warm-up (typical)	Total drift of 50 MHz (0.4 pm at 1550nm) (or less) over 60 hours (or more)		
4	Tuning type and range	Thermal (standard), 1nm (125GHz@1550nm) (or more) under ambient (laboratory) temperature		

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5	Spectral line width (using self-heterodyne beat method, 120µsec delay)	1kHz (or less)		
6	Instantaneous (Lorentzian fit) spectral line width	100Hz (or less)		
7	Instantaneous spectral line width inferred from noise floor	2Hz (or less)		
8	Phase Noise (µrad/√Hz, 1m optical path)	2.0 (or less) @ 0.1kHz 0.8 (or less) @ 1kHz 0.4 (or less) @ 10kHz		
9	Frequency Noise (Hz/√Hz)	65 (or less) @ 0.1kHz 26 (or less) @ 1kHz 13 (or less) @ 10kHz		
10	Wavelength stability due to thermal drift	15MHz/°C (or less) up to +65°C (or more)		
11	Output power and regulation (<i>primary laser/amplifier only</i>)	2W maximum, controllable between 30-100% (or wider) of maximum		
12	Output power (<i>leapfrog laser only</i>)	fixed at 40mW (nominal)		
13	Beam quality factor (M ²)	1.1 (or less)		
14	Optical S/N ratio (dB) (50pm resolution)	50 (or more)		
15	Max Relative Intensity Noise (RIN) (dBc/Hz)	-100 (or less)		
16	Long term power stability (RMS, 1 hour at 25°C)	Within ±2%		
17	Output fibre termination	FC/APC		
18	Coherence length	80km (or more)		
19	Maximum nominal size – <i>seed and leapfrog lasers</i>	Each laser must fit within an enclosure that is mountable on a standard 19inch wide rack. Enclosure must be able to accommodate 10 (or more) future additional seed and/or leapfrog lasers.		
20	Maximum nominal mass – <i>seed laser, leapfrog laser, rack system</i>	13kg (or less)		

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21	Maximum nominal size – <i>optical amplifier</i>	must be mountable or must fit within an enclosure that is mountable on a standard 19inch wide rack		
22	Maximum nominal mass – <i>optical amplifier</i>	14kg (or less)		
23	Input Power	Must be able to accept 100-120VAC at 50-60Hz from a properly grounded standard power outlet		
24	Thermal stabilization of frequency	2 minutes (or less) as governed by the seed laser		
25	Thermal stabilization of output power	30 minutes (or less) as governed by optical amplifier		
26	Operating ambient temperature	+15 to +40°C (or wider)		
27	Storage ambient temperature	0 to +50°C (or wider)		
28	Operation or storage ambient humidity	0 to 70% (or wider) relative humidity, non-condensing atmosphere		
29	Communication	Although each laser (primary and leapfrog) will be operable by itself (i.e., turnkey), any optional communication between a (user provided) PC and both lasers and optical amplifier must permit USB connection.		
30	Interlock	Must incorporate a remote interlock connector designed to prevent laser light from emitting from both seed laser and optical amplifier when it (the interlock) is opened.		
31	Key switch	A key switch on both seed laser and optical amplifier must be turned for the laser to operate. When the key is off, both seed laser and optical amplifier are prevented from emitting. The key must be actively turned to the ON position each time the laser is powered on.		

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32	Information LEDs	The seed laser and optical amplifier must incorporate information LEDs which display whether power is connected &/or the laser is on. At least one of the LEDs must be illuminated whenever the device is emitting or could emit light.		
33	CSA Apprvoal	All goods must be CSA approved or acceptable equivalent		
34	Manuals	The Contractor must provide one (1) Operation and Technical Manual with the delivery of each item in both hard and soft copy. The manuals must be delivered in English as existing commercial off-the-shelf manuals. All electronic copies must be in Adobe PDF format delivered on a CD or DVD.		

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ANNEX "B"

BASIS OF PAYMENT

- Prices in Canadian Dollars
- FOB Destination
- GST is to be excluded from price quoted herein
- GST will be shown as a separate item on the invoice

Item Description	Quantity	Price	Extended Price
Turnkey continuous wave (CW) dual laser system for the customized assembly of a Photon Doppler Velocimetry (PDV) system	1	\$ _____ /each	\$ _____
TOTAL			\$ _____

Make: _____

Model: _____