

RETURN BIDS TO:
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Bid Receiving - PWGSC / Réception des soumissions
- TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
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
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Electronics, Simulators and Defence Systems Div.
/Division des systèmes électroniques et des systèmes de
simulation et de défense
11 Laurier St. / 11, rue Laurier
8C2, Place du Portage
Gatineau
Québec
K1A 0S5

Title - Sujet HIGH FREQUENCY POWER AMPLIF.		
Solicitation No. - N° de l'invitation W7714-156006/A		Amendment No. - N° modif. 006
Client Reference No. - N° de référence du client W7714-156006		Date 2014-10-30
GETS Reference No. - N° de référence de SEAG PW-\$\$QF-110-24707		
File No. - N° de dossier 110qf.W7714-156006	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-11-13		Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: MacNeil, Jennifer		Buyer Id - Id de l'acheteur 110qf
Telephone No. - N° de téléphone (819) 956-5577 ()		FAX No. - N° de FAX (819) 956-5650
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 No. 6

This amendment has been raised to address the following Bidder questions:

Question # 1

In the Annex A specification table there is no mention of unit to unit phase tracking or stability requirements. Is this correct or is there an important specification for phase tracking between units across say a batch of 8 units?

Answer # 1

There is no absolute phase requirement for a particular unit. There is, however, a phase stability requirement in Item 8.

Question # 2

What is maximum permissible level of line (60Hz) sidebands on the 1 kWatt output signal?

Answer # 2

Item 7 specifies maximum 60 Hz sideband levels.

Question # 3

What is/are the applicable safety specifications or requirements, for example, UL/CSA/ EN61010 etc.

Answer # 3

To be legal in Canada, the requirement is Canadian Electrical Code CAN-CSA C22.1-09 or equivalent. There are other certification bodies capable of certifying the product to the Canadian Electrical Code including UL among a few others. As long as they are accredited by the Standards Council of Canada (SCC) or equivalent recognized by SCC for the certification of the product to the Canadian Electrical Code CSA C22.1-09, this is considered equivalent.

Question # 4

What is the frequency range you are looking for?

Answer # 4

Item 4 specifies frequency range.

Question # 5

In reference to Item 2 from Annex A Mandatory Technical Specifications please advise if a system designed to accept a fixed RF drive level of 1mW or less, and which provides internal Automatic Level Control (ALC) to compensate for gain and load VSWR variations, would meet this technical requirement?

Answer # 5

Yes, provided all requirements are met.

Question # 6

In reference to Item 3 from Annex A Mandatory Technical Specifications please advise if the maximum bandwidth of the FM modulated signal?

Answer # 6

The maximum bandwidth is not currently defined, but can be assumed to be 1% of the carrier frequency.

Question # 7

In reference to Item 10 from Annex A Mandatory Technical Specifications please advise the maximum load VSWR seen by the amplifier at the 2nd and 3rd harmonic frequencies. Can the harmonic terminating impedances be provided if they are known?

Answer # 7

Harmonic terminating impedances are not currently defined. The VSWR at the harmonic frequencies can be assumed to be infinite.

Question # 8

In reference to Item 10 from Annex A Mandatory Technical Specifications please confirm that when operating at a forward output power of greater than 500 watts but less than 1000 watts that the maximum output VSWR will be limited to 3:1?

Answer # 8

Yes.

Question # 9

In reference to Item 12 from Annex A Mandatory Technical Specifications please confirm the 2500VA maximum primary power specification applies to operation only into a matched load and does not apply to operation into loads resulting in VSWRS greater than or equal to 3:1.

Answer # 9

Item 12 applies to all the forward power and VSWR ranges described in Item 10.

Question # 10

In reference to Item 13 from Annex A Mandatory Technical Specifications, it is typically accepted that an amplifier system operating over a more limited input voltage range will provide a more efficient and cost effective solution. Can you advise if a system that operates over a range of 180 – 264 Vac would be acceptable and if not, why operation below 180 Vac is needed for this requirement?

Answer # 10

Item 13 is amended to read 180 – 240 volts, not 110 – 240 volts. The range 180 – 240 volts can be justified as it will accommodate common three-phase and split-phase utility power sources.

Question # 11

In reference to Part 2 – Bidder Instructions, section 2. Submission of Bids please confirm bids are available to be submitted by facsimile.

Answer # 11

It would be acceptable to submit your Bid by facsimile.

Question # 12

In reference to Part 6 – Resulting Contract Clauses, section 12. SACC Manual Clauses, please confirm that equipment supplied which has undergone CSA Special Inspection to C22.2 and has been labelled in accordance with completion of inspection meets the requirements of B1501C Electrical equipment 2006-06-16.

Answer # 12

Yes.

Question # 13

In reference to Item 4 from Annex A Mandatory Technical Specifications, regarding the Carrier frequency, what is the operating spectrum of the signal you want to amplify?

Answer # 13

Assume the input spectrum has negligible harmonics, such that Items 5 and 6 pertain to the nonlinearity of the amplifier rather than the input waveform.

Question # 14

Please confirm delivery is to an external shipping dock, delivered equipment will not be stored outside and bulk packaging of more than 1 amplifier is acceptable

Answer # 14

Yes, delivery is to an external shipping dock. Yes, delivered equipment will be stored inside to the extent of conditions given by Items 23, 24, and 25. Yes, bulk packaging is acceptable.

Question # 15

In reference to Item 19 from Annex A Mandatory Technical Specifications it states, Control functions: Gate on and off, load mismatch trip point, reset after fault. Can this be defined further, we are not sure to what load mismatch trip point is referring.

Answer # 15

Load mismatch trip point is the level of the load VSWR at which an excessive load impedance mismatch fault condition occurs.

Question # 16

In reference to Item 21 from Annex A Mandatory Technical Specifications it states, Size: Standard 19-inch rack-mount, maximum 3 rack units height. Would it be acceptable if the rack height for the power supply and power amplifier was 9U or less?

Answer # 16

No. Requirement is for 3 rack units (5.25 inches). The Crown believes that 9 rack units is excessively large for an amplifier of the type contemplated by these requirements.

Question # 17

Size: it says in the Solicitation: "Standard 19-inch rack-mount, maximum 3 rack units height". Is it mandatory?

To note, requesting 01 Kilowatt as Output Power is quite large and hence it requires a large Amplifier that is larger than the above mentioned Size specs.

Answer # 17

Yes. Based on previous investigation by the Crown, this specification is achievable with current technology.

Question # 18

What are the Exact Dimensions (**LxWxD**) of the rack or the Cabinet where the Amplifiers are to be installed? (this point 4.0 is in relation with point above - Size)

Answer # 18

"Standard 19-inch rack-mount, maximum 3 rack units height" refers to a box that has a maximum width of 17.5 inches, a maximum height of 5.25 inches, and a maximum depth of 20.0 inches. In addition, the boxes have an integrated front panel that is 19.0 inches wide, drilled with holes as required to mount in a standard 19-inch rack. It is permissible to have feedthrough connectors, switches, lights, and similar items protrude up to 1.0 inches from the front of the box and up to 1.0 inches from the rear of the box.

Question # 19

Any Specific Manufacturing Certifications needed? i.e. Industry Canada or equivalent? or no need for any?

Answer # 19

The product needs to be certified to the Canadian Electrical Code as described in document B1501C Electrical equipment 2006-06-16. There is no Industry Canada radiofrequency certification required for this equipment since it is experimental in nature.

Question # 20

Can we deliver them in batches of 30 units per month? That way you have 30 days to test and except them before you pay for the batch.

Answer # 20

Delivery can be in stages provided all units are received by 31 March 2015.

Question # 21

In reference to Item 10 from Annex A Mandatory Technical Specifications, we believe it implies that it must be able to deliver 1000W up to a 3:1 load, and 500W up to a 5:1 load. Is this correct?

Answer # 21

Yes.

Question # 22

In reference to Item 19 from Annex A Mandatory Technical Specifications, what is meant by "load VSWR trip point"? It sounds like you want to be able to control that point externally. Can you confirm?

Answer # 22

Yes.

Question # 23

What is the amplifier Noise figure(Max dB)?

Answer # 23

No amplifier noise figure is explicitly defined, but the amplifier noise figure must be consistent with the phase noise requirement of Item 8.

Question # 24

What is the amplifier compression (dBm min)?

Answer # 24

No amplifier compression is explicitly defined, but the amplifier compression must be consistent with the output harmonic level requirements of Items 5 and 6.

Question # 25

In reference to Item 10 from Annex A Mandatory Technical Specifications, at 5:1 VSWR, does the unit need to meet the spec for Item #12 (2500W) and at 500W output?

Answer # 25

Yes.

Question # 26

Can Class-C bias be used since there is no linearity spec and the application is FM no AM? This will give greater efficiency.

Answer # 26

No amplifier class is explicitly defined, but there is a linearity requirement in Items 5 and 6, and the load cannot be assumed to be tuned.

Question # 27

What is the RF trip point?

Answer # 27

Load mismatch trip point is the level of the load VSWR at which an excessive load impedance mismatch fault condition occurs.

Question # 28

Can you please provide some details on how the amplifiers will be used? This will better help us provide the proper kind of amplifier. What is the source of the input? What is the output load?

Answer # 28

The amplifier input is a waveform generator. The amplifier output is a broadband antenna.

Question # 29

Can you please confirm that 1 kW is the maximum power required?

Answer # 29

There is no maximum output power defined. Items 1 and 10 specify minimum output powers.

Question # 30

Our amplifier will not fold back its output power until the load exceeds 3:1, between 3:1 and 5:1 the output will be progressively reduced down to 500W. Will this be acceptable?

Answer # 30

Yes.

Question # 31

What is the expected transmission waveform duty cycle, i.e. gating ON time versus gating OFF time?

Answer # 31

Duty cycle is 100% for an indefinite period of time.

Question # 32

Can the offered unit be higher than 3 rack units (5.25 inches)?

Answer # 32

No. "Standard 19-inch rack-mount, maximum 3 rack units height" refers to a box that has a maximum width of 17.5 inches, a maximum height of 5.25 inches, and a maximum depth of 20.0 inches. In addition, the boxes have an integrated front panel that is 19.0 inches wide, drilled with holes as required to mount in a standard 19-inch rack. It is permissible to have feedthrough connectors, switches, lights, and similar items protrude up to 1.0 inches from the front of the box and up to 1.0 inches from the rear of the box.

Question # 33

The delivery completion date requested is March 31, 2015. Is it acceptable to make multiple partial deliveries as long as all units are delivered by March 31, 2015?

Answer # 33

Yes.

Question # 34

Some RFQs provide details on the expected budget of a project. Is that information available for this requirement.

Answer # 34

No.

Question # 35

What is the exact application for amplifiers?

Answer # 35

The amplifier input is a waveform generator. The amplifier output is a broadband antenna. Further detail is not available.

Question # 36

In reference to Item 23 from Annex A Mandatory Technical Specifications Operating temperature: Minimum range -20 to 40 celsius ambient. The industry standard is from 0 to +40 C would this be acceptable?

Answer # 36

The amplifier unit may need to be placed in an unheated shelter and thus the requirement in Item 23.

Question # 37

In reference to Item 7 from Annex A Mandatory Technical Specifications, would it be acceptable for the Spurious to be -60 dBc?

Answer # 37

No, Item 7 is critical for application.

Question # 38

In reference to Item 5 from Annex A Mandatory Technical Specifications, would it be acceptable for the Harmonics Even to be -20dBc?

Answer # 38

No, -20 dBc is excessive.

All other Terms and Conditions of the RFP remain unchanged.