RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Réception des soumissions - TPSGC / Bid Receiving - PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

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
TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Title - Sujet Nanotube de Carbone	
Solicitation No. - N° de l'invitation W7701-125241/A	**Amendment No. - N° modif.** 002
Client Reference No. - N° de référence du client W7701-12-5241	**Date** 2012-10-23
GETS Reference No. - N° de référence de SEAG PW-$QCL-028-14878	
File No. - N° de dossier QCL-1-34865 (028)	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2012-10-31**	**Time Zone** **Fuseau horaire** Heure Avancée de l'Est HAE
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☑ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Roy, Josée	**Buyer Id - Id de l'acheteur** qcl028
Telephone No. - N° de téléphone (418) 649-2932 ( )	**FAX No. - N° de FAX** (418) 648-2209
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 002
W7701-125241

The purpose of Amendment 002 is:

1- Amend criteria 2.1.1, 2.1.2, 2.1.3, 2.3.3.4.

2 Rated technical criteria		**Max**	**Min**
2.1 ~~Company~~ Bidder's experience		**25**	**16**
2.1.1 ~~Company~~ Bidder's experience in the microfabrication and electro-optic (EO) characterization of thin films, and EO devices based on thin films By significant project, we mean a project longer than one year, with a min. of one full-time (37.5 hours / week) resource working on the project.	- The ~~company~~ bidder shows no experience in this field **(0 pt.)** - The ~~company~~ bidder completed one significant project related to the field **(3 pts.)** - The ~~company~~ bidder has completed more than one significant project related to the field **(5 pts.)**	5	
2.1.2 ~~Company~~ Bidder's experience in the microfabrication and electro-optic characterization of carbon nanotubes (vertically oriented and "spaghetti" types, etc.) and EO devices based on carbon nanotubes By significant project, we mean a project longer than one year, with a min. of one full-time (37.5 hours / week) resource working on the project.	- The ~~company~~ bidder shows no experience in this field **(0 pt.)** - The ~~company~~ bidder completed one significant project related to the field **(10 pts.)** - The ~~company~~ bidder has completed more than one significant project related to the field **(15 pts.)**	15	
2.1.3 ~~Company~~ Bidder's experience in modeling of solid films stacks By significant project, we mean a project longer than one year, with a min. of one full-time (37.5 hours / week) resource working on the project.	- The ~~company~~ bidder shows no experience in this field **(0 pt.)** - The ~~company~~ bidder completed one significant project related to the field **(3 pts.)** - The ~~company~~ bidder has completed more than one significant project related to the field **(5 pts.)**	5	

2.2Management		**10**	**5**
2.2.1 Management method and tools. The company should describe how it proposes to control the management of the project Bidders should describe how they propose to control the management of the project. It should also present the tools that will be used to carry out the project. The aspects that should be addressed by bidders include: (a) its method of monitoring each task authorization separately (billing, monitoring the progress of work, etc.); (b) its management approach with regard to the unpredictability of a task authorization contract; (c) its contingency plan for the replacement of resources (e.g. what happens if a proposed resource is no longer available?); (d) its method of managing subcontracted work (if applicable); and; (e) if the bidder is a consortium, the latter should provide a clear description of any agreements between consortium members and the management process to be put in place to continuously manage its performance.	-Other status **(0 pt.)** -Most strategies, methodologies and proposed plans are poorly adapted to the specific project details. At least one appropriate management tool is proposed by the bidder. **(1 pt.)** -The aspects covered by bidders are appropriate and reflect the risks and details of the project. At least one appropriate management tool is offered by the bidder. **(5 pts.)** -Most strategies, methodologies and proposed plans are adequate and reflect the risks and details of the project. Few appropriate management tools are also offered by bidders. **(8 pts.)** -Strategies, methodologies and proposed plans for all elements are appropriate and reflect the risks and details of the project. Various appropriate management tools are proposed by bidders and their effectiveness is demonstrated. **(10 pts.)**	10	
2.3PROPOSED RESOURCES (by resource category) More than one resource can be proposed per category. In this case, each resource will be evaluated individually. The overall scores obtained by each resource in the given category will be added and then divided by the number of resources available to obtain an average. The average will be the rating assigned to bidders. The experience gained during the study period may be accepted if its relevance to the criteria is sufficiently demonstrated.		**150**	**62**

2.3.1 Proposed resources in the project management resource category		**8**	**4**
2.3.1.1 Training (education) of the proposed resource (max. of 2 pts.)	**2 pts.:**Bachelor's degree (or higher) in science, engineering, project management or business administration **1 pt.:** Other bachelor's degree (or higher diploma) **0 pt.:** Any other situation	2	
2.3.1.2 Experience of the proposed resource in R&D project management (max. of 6 pts.)	**6 pts.:** At least 24 months of experience in this field **4 pts.:** 12 to 23 months of experience in this field **2 pts.:** At least 6 months but less than 12 months of experience in this field **0 pt.:** Less than 6 months of experience in this field	6	
2.3.2 Proposed resources in fabrication and characterization of EO devices based on the thin films resource category		**42**	**19**
2.3.2.1 Training (education) of the proposed resource	a. Master's degree or higher in engineering physics or related engineering field or science, such as physics **(5 pts.)** b. Bachelor's degree in engineering physics or related engineering field or science, such as physics and at least 6 years of experience in research and development **(3 pts.)** c. Bachelor's degree in engineering physics or related engineering field or science, such as physics **(1 pt.)** d. Any other degree **(0 pt.)**	5	
2.3.2.2 Experience of the proposed resource in the following characterization techniques a)Stylus profilometry: **1 pt.** b)Optical profilometry: **1 pt.**		17	

c)Four point resistivity: **1 pt.** d)Electrical probing: **1 pt.** e)Ellipsometry, fixed wavelength: **1 pt.** f)Ellipsometry, wavelength varying from visible to 2.0 µm: **2 pts.** g)Ellipsometry, wavelength varying up to 12 µm: **3 pts.** h)Film stress measurement with the use of automated instrument: **2 pts.** i)Scanning electron microscopy (SEM): **2 pts.** j)Transmission/reflection measurement: **1 pt.** k)Transmission/reflection measurement with the use of automated systems such as BRUKER VERTEX 70V: **2 pts.** The final score for this criterion will be the sum of demonstrated knowledge. Note: If a project has involved more than one instrument listed above, the evaluation team will consider that the proposed resource has expertise with the instruments involved in the project or training (e.g., if during the project "X," the resource has carried out electrical probing and SEM, 2 pts. will be awarded for this project.)			
2.3.2.3 Experience of the proposed resource in the following micro-fabrication techniques a)Radio-frequency sputtering: **1 pt.** b)Chemical vapour deposition: **1 pt.** c)Thermal growth: **1 pt.** d)Plasma etching: **1 pt.** e)PECVD (plasma enhanced chemical vapour deposition): **1 pt.** f)Photolithography: **2 pts.** g)Wire bonding: **1 pt.** The final score for this criterion will be the sum of demonstrated knowledge. Note: If a project has involved more than one of the techniques listed above, the evaluation team will consider that the proposed resource has expertise in using each of the techniques involved in the project or training (e.g., if, during project "X," the resource has experience in PECVD and wire bonding, 2 points will be awarded for this project.)		8	
2.3.2.4 Experience of the proposed resource with thin films By significant project, we mean a project of thin film deposition in which the proposed resource has worked on the project for a full-time equivalent of more than 6 months (37.5 hours / week).	The resource has participated, as main developer, on a significant project where thin films were grown **(4 pts. per project, max. of 12 pts.)**	12	
2.3.3 Proposed resources for fabricating and characterisation of EO components based on carbon nanotubes		**54**	**23**

2.3.3.1 Training (education) of the proposed resource	a. Master's degree or higher in engineering physics or related engineering field or science such as physics **(5 pts.)** b. Bachelor's degree in engineering physics or related engineering field or science such as physics and at least 6 years of experience in research and development **(3 pts.)** c. Bachelor's degree in engineering physics or related engineering field or science such as physic (**1 pt.)** d. Any other degree **(0 pt.)**	5	
2.3.3.2 Experience of the proposed resource in the following characterization techniques a)Stylus profilometry: **1 pt.** b)Optical profilometry: **1 pt.** c)Four point resistivity: **1 pt.** d)Electrical probing: **1 pt.** e)Ellipsometry, fixed wavelength: **1 pt.** f)Ellipsometry, wavelength varying from visible to 2.0 µm: **2 pts**. g)Ellipsometry, wavelength varying up to 12 µm: **3 pts.** h)Film stress measurement with the use of an automated instrument: **2 pts.** i)Scanning electron microscopy (SEM): **2 pts.** j)Transmission/reflection measurement: **1 pt.** k)Transmission/reflection measurement with the use of automated systems such as BRUKER VERTEX 70V: **2 pts.** The final score for this criterion will be the sum of demonstrated knowledge. Note: If a project has involved more than one instrument listed above, the evaluation team will consider that the proposed resource has expertise with each of the instruments in the project (e.g., if during the project "X," the resource has made electrical probing and SEM, 2 points will be awarded for this project).		17	
2.3.3.3 Experience of the proposed resource in the following growth and micro-fabrication techniques a)Radio-frequency sputtering: **1 pt.** b)Chemical vapour deposition: **1 pt.** c)Thermal growth: **1 pt.** d)Plasma etching: **1 pt.** e)PECVD (plasma enhanced chemical vapour deposition: **2 pts.** f)Photolithography: **1 pt.**		8	

g)Other technique not mentioned above used for growth of carbon nanotubes: **1 pt.** The final score for this criterion will be the sum of knowledge demonstrated. Note: If a project has involved more than one of the instruments listed above, the evaluation team will consider that the proposed resource has expertise with each instrument used in the project (e.g., if during the project "X," the resource has PECVD and RF sputtering, 2 points will be awarded for this project).			
2.3.3.4 Experience of the proposed resource with electro-optic devices based on carbon nanotubes By significant project, we mean a project in which the proposed resource has worked for a full-time equivalent of more than 6 months (37.5 hours / week).	The resource has participated as the main resource on a significant project requiring the fabrication of electro-optic devices based on carbon nanotubes **(8 pts. per project, max. of 24 pts.)**	24	**8**
2.3.4 Proposed resource for the optical modeling resource category		**17**	**6**
2.3.4.1 Training (education) of the proposed resource	a. Master's degree or higher in engineering physics with specialization in optics or related engineering field or science, such as physics **(5 pts.)** b. Bachelor's degree in engineering physics with specialization in optics or related engineering field or science, such as physics and at least 3 years of experience in the field **(2 pts.)** c. Bachelor's degree in engineering physics or related engineering field or science, such as physic s **(1 pt.)** d. Any other degree **(0 pt.)**	5	
2.3.4.2 Experience of the proposed resource with optical modeling By significant project, we mean a project in which the proposed resource has worked on the project for a full-time equivalent of more than 6 months (37.5 hours / week).	The resource has participated as the main resource in the optical modeling component on a significant project where optical modeling was done **(4 pts. per project, max. of 12 pts.)**	12	
2.3.5 Proposed resource for the thermal/mechanical modeling resource category		**29**	**10**
2.3.5.1	a. Master's degree or higher in	5	

Training (education) of the proposed resource (max. of 5 pts.)	mechanical or engineering physics or related engineering field or science, such as physics **(5 pts.)** b. Bachelor's degree in mechanical or engineering physics or related engineering field or science, such as physics and at least 3 years of experience in the field **(2 pts.)** c. Bachelor's degree in mechanical or engineering physics or related engineering field or science, such as physics **(1 pt.)** d. Any other degree **(0 pt.)**		
2.3.5.2 Experience of the proposed resource with thermal modeling By significant project, we mean a project in which the proposed resource has worked for a full-time (37.5 hours / week) equivalent of more than 3 months.	The resource has participated as the main resource in the thermal modeling component on a significant project where thermal modeling was carried out **(4 pts. per project, max. of 12 pts.)**	12	
2.3.5.3 Experience of the proposed resource with mechanical modeling By significant project, we mean a project in which the proposed resource has worked for a full-time (37.5 hours / week) equivalent of more than 3 months.	The resource has participated as the main resource in the mechanical modeling component on a significant project where mechanical modeling was carried out **(4 pts. per project, max. of 12 pts.)**	12	
Bonus points (5 pts.): - Bidders propose at least one resource with a university degree (Master's or higher) in engineering physics or related engineering field or science, such as physics, and has at least 6 months of full-time equivalent experience in MEMS or metamaterials (design and fabrication). To be included in the contract in the resource category 'MEMS or metamaterials,' the proposed resource must demonstrate that it meets all of the conditions contained in the statement above, 'Bonus points.'		**5 pts**	
TOTAL		**185**	**92.5**

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.