Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Réception des soumissions - TPSGC / Bid Receiving - PWGSC
Voir dans le document/
See herein
NA
Québec
NA

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

Title - Sujet North Warning System Hybrid Power S North Warning System Hybrid Power System	
Solicitation No. - N° de l'invitation 23332-220150/A	**Amendment No. - N° modif.** 008
Client Reference No. - N° de référence du client 23332-22-0150	**Date** 2022-03-24
GETS Reference No. - N° de référence de SEAG PW-$QCL-056-18266	
File No. - N° de dossier MTA-1-44079 (056)	**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 2022-05-06 Heure Avancée de l'Est HAE

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☑ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à: Mohammed-Azizi, Samia	**Buyer Id - Id de l'acheteur** qcl056
Telephone No. - N° de téléphone (418) 576-9803 ( )	**FAX No. - N° de FAX** ( ) -

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:

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

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**

Issuing Office - Bureau de distribution
TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Canada

AMENDMENT 008

The purpose of this amendment is to answer industry questions and complete the statement of work accordingly.

AMENDMENTS

1) In the Annex A, Statement of Work, at the end of section 4.1. Hybrid Power System

INSERT:

CanmetENERGY will provide 40 kWp bifacial photovoltaic solar panels to be integrated with the hybrid microgrid system. The specifications of the bifacial solar photovoltaic panels are provided in Annex A1, Specifications of Solar Photovoltaic Panels. The inverter(s) is (are) to be determined by the contractor, which will be procured by CanmetENERGY.

2) Following Annex A, Statement of Work:

INSERT:

Annex A1, Specifications of Solar Photovoltaic Panels (see attached).

ANSWERS TO INDUSTRY QUESTIONS

Enquiries - Bid Solicitation

To ensure consistency and quality of information provided to bidders, significant enquiries received and the replies to such enquiries will be provided simultaneously to bidders to which the bid solicitation has been sent, without revealing the sources of the enquiries.

Here are the questions which we have received:

Question 1	In reference to Annex A, Statement of Work, section 4 (4f, 4.5.2. and 4.5.3): Heat recovery: is heat recovery a future option or a required feature? Where is the recovered heat from diesel generators to be directed to, such as any building?
Answer 1	Heat recovery is a future option and not a required feature for the generators to be provided in the RFP. The eventual HMS will be integrated with the existing generators at the deployment site, which currently recover heat off the engine jacket. The recovered heat is used to condition the open space housing the electrical equipment. The intention is to enable an option that the microgrid controller will ensure the generators can operate as they play a critical role in maintaining the space temperatures.

Question 2	In reference to Annex B, Basis of payment, Table 3 - Will the NRC-Vancouver location have the same listing of assets and models as SRD in North Bay, Ontario Site?
Answer 2	NRC's power and control system infrastructure is not the same as at SRD site in North Bay. It is intended that the BESS, Microgrid Controller and 4 Quadrant Inverter be the same as the one to be deployed at the SRD site. NRC will perform the engineering study to integrate the system at their site. The Distributed Energy Resources at NRC Microgrid Infrastructure and a single line diagram that outlines the power distribution and the control system at NRC Microgrid facility will be provided to the contractor after the contract is awarded.
Question 3	In reference to Annex A, Statement of Work, Table 7 - Satellite Communication - Please confirm specifically how the satellite terminal interfaces with the microgrid controller.
Answer 3	It is the contractor's responsibility to determine how to integrate the MissionLink 350 Satellite Terminal for a potential remote access. The objective is to enable a remote access to the data storage without needing to go through the Controllogix Platform. The Missionlink router uses a standard communication protocol.
Question 4	Are the solar PV and solar inverter specifications available at this time? If so, may you please provide them?
Answer 4	The specifications of the 40 kWp Solar PV array that has been procured for this project are attached. As mentioned in the answer to Question 4 in the Amendment 004, the solar inverter is to be selected based on the recommendation of the contractor therefore specifications are not available. The bidder can assume a suitable inverter compatible with the solar PV arrays mentioned above. The micro-inverters we are considering are the EnPhase IQ8+ micro-inverters. A different inverter or micro-inverters for the PV system can be specified by the bidder to be compatible with the microgrid controller.
Question 5	In reference to Amendment 003, Table 4 - How did Canada arrive at up to 400 sources as specified in Table 4? Please provide examples of what a 'source' would be.

Answer 5	Under Amendment 003 We have indicated that we would like to integrate three or more renewable energy sources. For more flexibility and eventual reliability of the system when deployed, the use of microinverters for every two PV modules would be a best-case scenario. This would result in 150 microinverters for a hypothetical 120 kW system with 400 W bifacial PV panels. A “source” would be one of these microgrid inverters. For potential future requirements, we have proposed that vendor provide a quote for the addition of up to 400 such sources. 400 was selected as our upper limit, but it is not required for the vendor to provide that many. The vendor can indicate the maximum number of sources possible (optional pricing) as the current minimum requirement is three.
Question 6	The RFP requires the pricing to be valid for 180 days. Considering the turbulent times currently with fluctuating commodity pricing vendors are not prepared to risk and hold pricing for the duration as indicated in the terms and conditions: a) Will taking an exception to this clause make the bid non-compliant? b) Is Canada prepared to entertain a different time duration for the validity of the pricing?
Answer 6	Bids have to remain open for acceptance until the end of the evaluation process. Given the complexity of this requirement and the fact that it includes high security requirements a period of 180 days is a reasonable period of time. That being said, Canada understands that bidders will have to take into account the possible price fluctuation over this period in their financial proposal.
Question 7	The foreign exchange is deemed to be fixed based on what the vendor has estimated of used in the proposal. a) Will Canada void the bid as non-compliant should an exception be taken to this clause? b) Is Canada prepared to consider the foreign exchange at the award of the contact?
Answer 7	As stated at 3.1.3. in the standard clause C3011T Exchange Rate Fluctuation (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/C/C3011T/5), the requirement does not offer exchange rate fluctuations risk mitigation. Requests for exchange rate fluctuations risk mitigation will not be

	considered. All bids including such provision will render the bid non-responsive. Therefore, bidders will have to take into account the possible rate fluctuation over this period in their financial proposal.

****ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME****

ANNEX A1 - SPECIFICATIONS OF SOLAR PHOTOVOLTAIC PANELS

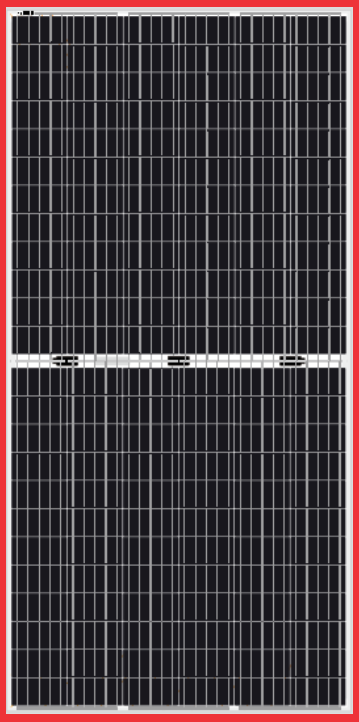
See following pages

Stace

STADM G395B6-144HST

380|385|390|395

72 CELLS MONO-CRYSTALLINE
BIFACIAL DOUBLE GLASS PV MODULE



PERFORMANCE

- High performance under low light conditions (Cloudy days, mornings and evenings)

PREMIUM QUALITY & HIGH EFFICIENCY

- Up to 19.36% efficiency

PERFORMANCE WARRANTY

- **25 years** linear power output warranty*
- **10 years** material and workmanship warranty*

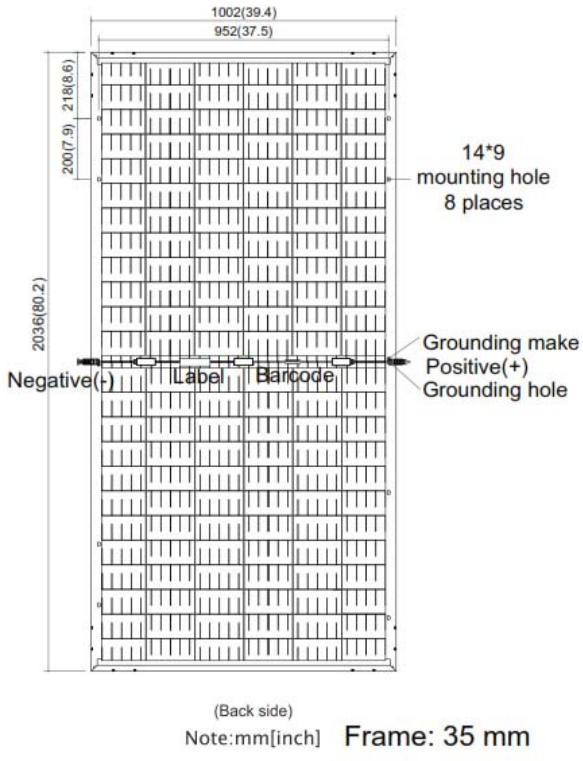
* See PV Module Limited Warranty and General Warranty for conditions

VOLTAGE RESISTANCE

- Module can withstand the 1500V system voltage

ELECTRICAL FEATURES		Standard Testing Conditions (STC): 1000W/m², 25°C, AM 1.5			
Maximum power rating (Pmax)*	**Wp**	**380**	**385**	**390**	**395**
Power tolerance	Wp	-0/+3%	-0/+3%	-0/+3%	-0/+3%
Maximum power voltage (Vmp)	V	40.06	40,30	40,52	40,74
Maximum power current (Imp)	A	9,49	9,56	9,63	9,70
Open circuit voltage (Voc)	V	48,30	48,50	48,70	48,90
Short circuit current (Isc)	A	10,28	10,34	10,40	10,46
Module Efficiency (Nm)	%	18,63	18,87	19,12	19,36
Bifaciality Factor	%	70 (+/- 5%)			
BIFACIALITY GAIN					
10%	**Pm**	418W	423,5W	429W	434,5W
20%	**Pm**	456W	462W	468W	474W
30%	**Pm**	494W	500,5W	507W	513,5W

BACK VIEW



SYSTEM AND PRODUCT STANDARDS

- ISO 9001: 2015 – ISO Quality Management System
- ISO 14001: 2015 - ISO Environmental Management
- Canadian Standards Association (CSA), UL1703, ULC/ORD C-1703

MECHANICAL DATA

Cell Arrangement	144(6X24)
Module Structure	Glass/POE/Glass
Glass Thickness	2.0mm/2.0mm(front/back)
Application Class	Class A at IEC 61730
Junction Box Rating	IP68
Cables	$4mm^2$; (+) 300mm, (-) 150 mm
Connector Type	MC4/MC4 Compatible
Fire Rating Class	A

MAXIMUM RATINGS

Operating Temperature	-40 to + 85 °C
Max. Load Capacity	Snow 5400Pa / Wind 2400 Pa
Max. System Voltage	1500V DC(IEC)
Max. Series Fuse Rating	20A
Number of Diodes	3

PACKAGING

Module Dimensions	2036x1002x35mm
Weight	27.1kg
Pallet Dimensions	2085x1130x1140mm
Container	40' HQ
Pieces per Pallet	31
Pallets per Container	22
Pieces per Container	682
Gross Weight per Pallet	885kg
Gross Weight per Container	19 470kg

TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature (NMOT)	45°C +/- 2°C
Temperature Coefficient of Isc	+0.038%/°C
Temperature Coefficient of Voc	-0.270%/°C
Temperature Coefficient of Pmax	-0.365%/°C

Since 1977, our team has been contributing to the energy sector development worldwide through the design of quality equipment and innovative integrated solutions. Our products hold many performance hallmarks and our team maintains research partnerships with renowned universities and research institutes to make sure we keep improving on energy harvesting.

The depth of our portfolio allows us to unleash the optimal technology mix for every specific situation. Depending on one site's needs and specification, our offer redefines itself to get you the most out of available resources.

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