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

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Public Works and Government Services Canada
Canada Place/Place du Canada
10th Floor/10e étage
9700 Jasper Ave/9700 ave Jasper
Edmonton
Alberta
T5J 4C3
Bid Fax: (780) 497-3510

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

Public Works and Government Services Canada
Canada Place / Place du Canada
10th Floor /10e étage
9700 Jasper Ave / 9700 ave Jasper
Edmonton
Alberta
T5J 4C3

Title - Sujet Sewer Lift Station Upgrade	
Solicitation No. - N° de l'invitation EP922-210257/A	**Amendment No. - N° modif.** 008
Client Reference No. - N° de référence du client AAFC EP922-210257	**Date** 2020-07-29
GETS Reference No. - N° de référence de SEAG PW-$PWU-004-11855	
File No. - N° de dossier PWU-0-43021 (004)	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2020-08-04**	**Time Zone** **Fuseau horaire** Mountain Daylight Saving Time MDT
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☐ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Espedido, Karieleen K.	**Buyer Id - Id de l'acheteur** pwu004
Telephone No. - N° de téléphone (780) 231-4719 ( )	**FAX No. - N° de FAX** (780) 497-3510
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**	

Canada

This amendment has been raised with the following changes:

AMENDMENT #008:

ADDENDUM #007:
The following changes to the tender documents are effective immediately and will form part of the Contract documents:

SPECIFICATIONS & DRAWINGS

-Please remove Section 26 32 13.02 entitled “Power Generators to 45 kW” of the original tender package and replace with Section 26 32 13.02 Rev 01.

END OF AMENDMENT

Part 1 General

1.1 REFERENCE STANDARDS

.1 CSA Standard CAN/CSA-C282- Latest Edition.

.2 International Organization for Standardization (ISO)

.1 ISO 3046-1, Reciprocating Internal Combustion Engines - Performance - Part 1: Declarations of Power, Fuel and Lubricating Oil Consumptions, and Test Methods - Additional requirements for engines for general use.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Provide manufacturer's printed product literature, specifications and data sheets for power generators and include product characteristics, performance criteria, physical size, finish and limitations.

.3 Shop Drawings:

.1 Submit drawings are to include:

.1 Dimensioned drawing of set including engine, alternator, control cubicle, exhaust system, fuel system and accessories.

.2 Line diagram showing alternator, control cubicle, automatic transfer switch, manual bypass switch, voltage regulator, battery, battery charger, governor specifications.

.3 Diagram for automatic engine ventilation.

.4 Flow diagrams for:

.1 Fuel.

.2 Lubricating oil.

.3 Cooling air.

.5 Continuous full load output at 0.8 power factor lagging.

.6 Type and make of governor.

.7 Cooling air requirements in m3/s.

.8 British standard or DIN rating of engine.

.9 Set operation:

.1 Automatic starting, transfer to load, back to normal power and shut down.

.2 Manual starting.

.3 Automatic shut down on over cranking, overspeed, high engine temperature, low lube oil pressure, short circuit and alternator over voltage.

1.3 CLOSEOUT SUBMITTALS

.1 Submit data for incorporation into maintenance manual specified in Sections 01 78 00 - Closeout Submittals.

.1 Ensure that information is for unit supplied and not general description of units manufactured.

.2 Operation and maintenance instructions for engine, alternator, control panel, automatic transfer switch, manual bypass switch, battery charger, fuel system and accessories to permit effective operation, maintenance and repair.

.3 Technical data:

.1 Illustrated parts lists with parts numbers.

.2 Schematic diagram of electrical controls

.3 Flow diagrams for fuel, lube oil and cooling air.

1.4 MAINTENANCE MATERIAL SUBMITTALS

.1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.

.2 Include:

.1 2 lube oil filter replacement elements.

.2 2 air cleaner filter elements.

.3 Special tools for unit servicing.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements:

.1 Deliver materials to site in original factory packaging, labelled with manufacturer's name address.

Part 2 Products

2.1 SYSTEM DESCRIPTION

.1 Generator set consists of:

.1 Engine.

.2 Alternator.

.3 Control cubicle.

.4 Automatic transfer switch.

.5 Battery charger and battery.

.6 Automatic engine room ventilation equipment.

.7 Fuel supply system.

.8 Engine exhaust system.

.9 Mounting base.

.2 Set designed for emergency standby service to operate unattended.

2.2 GENERATING SET

.1 Capacity:

.1 Total output of engine in hp (brake) = British standard rating as defined to ISO 3046-1 expressed in hp (brake), minus the sum of the following:

.1 Power to drive cooling fan.

.2 Power loss for site conditions.

.2 Site conditions; derate for:

.1 Ambient temp: from -40 to +40 degrees C.

.3 Generator rating in kW x 1.34 divided by generator efficiency.

.2 Engine: to ISO 3046-1, natural gas 4 cycle, operating speed 1800 rpm, liquid cooled:

.1 Liquid cooled: radiator with engine driven fan and ethylene glycol anti-freeze non-sludging above -46 degrees C.

.2 Block heater: thermostatically controlled lube oil or liquid coolant heater connected to line side of automatic transfer switch to allow engine to start in -40 degree C ambient.

.3 Starting system:

.1 12 V dc motor, remote control, 12 V lead-acid storage battery of sufficient capacity to crank engine for 3 min at 0 degrees C without using more than 25% battery capacity.

.2 Battery charger: constant voltage, solid state, two stage from trickle charge at standby to boost charge after use, regulation +/-1% output for +/-10% input variation, and auto boost for 6 hours every 30 days.

.1 Capable of returning battery to full charge within cranking operations.

.2 Equipped with dc voltmeter, dc ammeter and on-off switch.

.4 Governor:

.1 Mechanical flyball, with speed adjustment

.1 Speed regulation no load to full load 5% maximum

.2 Mechanical hydraulic with:

.1 Steady state speed band of +/-0.5%.

.2 Speed regulation no load to full load 5% maximum.

.3 Electronic type, electric actuator, speed droop externally adjustable from isochronous to 5%, temperature compensated with steady state speed maintenance capability of +/-0.25%.

.5 Shock mounted engine instrument panel with:

.1 Lube oil pressure gauge.

.2 Lube oil temperature gauge.

.6 Fuel rack solenoid energized when engine running.

.3 Alternator: to NEMA MG1, single bearing, revolving field, coupled to engine by means of semi-flexible coupling and SAE housing, drip proof, amortisseur windings, synchronous type, class F insulation with:

.1 Brushless exciter, direct driven.

.2 Voltage regulator: solid state

.3 Output:

.1 According to drawings kVA at 0.8 pf, 3 phase,

.2 150% full load for 1 min.

.3 110% full load for 1 hour.

.4 100% full load continuously at 40 degrees C ambient.

2.3 CONTROL PANEL

.1 Totally enclosed, mounted on stand straddling generator.

.2 Panel door with formed edges and lockable handle with 2 keys.

.3 Flexible conductors between door and fixed panel.

.4 Instruments: ac ammeter and voltmeter with selector switches, frequency meter, engine running time meter, with miniature glass fast acting fuses for indicating instruments fitted at rear of instrument.

.5 Controls:

.1 Engine start and emergency stop buttons, test button, alternator output moulded case circuit breaker, program selector switch, power transfer switch, voltage control rheostat, "normal power" and "emergency power" pilot lights.

.2 Voltage control rheostat to be screwdriver adjust type with locking nut and mounted on the inside of the control panel.

.6 Automatic shut-down and alarms:

.1 Engine overcrank, overspeed, high temp, low lube oil pressure, short circuit, low battery voltage to alarm only, and alternator overvoltage.

.2 Alarms to be drop type illuminated annunciator, manual reset and set of NC/NO contacts be provided wired to terminal block for future connection to remote annunciator.

2.4 GENERATING SET OPERATION

.1 Program selector switch set at "Automatic".

.1 On normal power failure, after 10 s adjustable time delay to ignore transients, engine starts. Load is transferred when frequency and voltage reach rated values.

.2 On restoration of normal power, load transfers back to normal source after 10 s adjustable time delay and engine shuts down.

.2 Program Selector Switch set at "Manual"

.1 Start button controls engine but automatic transfer of load prevented.

.2 Manual transfer possible.

.3 Electrical transfer possible by use of power transfer switch.

.3 Program selector switch set at "OFF".

.1 Engine will not start.

.2 Switch lockable in this position.

.4 Test full load - unit starts up and assumes building non-essential load through test transfer switch without interrupting building essential load.

2.5 EXHAUST SYSTEM

.1 Heavy duty, residential type, horizontally mounted exhaust silencer with condensate drain, plug and flanged couplings.

.2 Heavy duty flexible exhaust hose with flanged couplings as indicated.

.3 Expansion joints, stainless steel, corrugated, of suitable length to absorb both vertical and horizontal expansion.

2.6 COOLING AIR SYSTEM

.1 Engine ventilating system:

.1 The engine intake air is to be filtered with engine mounted, replaceable, dry element filters.

.2 Enclosure intake is positioned to minimize any ingress of rain or snow.

.3 Louvers and other provisions to prevent the accumulation of ice or snow that might prevent operation.

2.7 EQUIPMENT IDENTIFICATION

.1 Provide equipment identification in accordance with Section 26 05 00 - Common Work Results for Electrical.

.2 Controls: size 4 nameplates.

.3 Meters, alarms, indicating lights: size 2 nameplates.

2.8 SOURCE QUALITY CONTROL

.1 Complete generator set factory tested.

.2 Tests:

.1 Verify voltage & frequency stability.

.2 Verify transient voltage & frequency dip response.

.3 Load test for 30 minutes.

.4 Automatic shut down devices on trouble alarms.

.5 Automatic start-up, transfer to loads back to normal power and shutdown.

.6 Battery charger's ability to revert to high rate charge after cranking.

.3 Submit certified copy of test results to Departmental Representative before shipment to site.

Part 3 Execution

3.1 INSTALLATION

.1 Position generating set and install as indicated.

.2 Install fuel supply as indicated in accordance with CSA-B139.

.3 Install ventilating air dampers, ducts, hoods, filters and fittings, exhaust system as indicated.

.4 Complete wiring and interconnections as indicated.

.5 Start generating set and test to ensure proper performance.

3.2 FIELD QUALITY CONTROL

.1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical.

.2 Notify Departmental Representative 10 working days in advance of test date.

.3 Demonstrate:

.1 Automatic start, transfer to load, retransfer to normal power and unit shut down.

.2 Manual start, transfer, retransfer and shut down.

.3 Operation of automatic shut-down devices and alarms.

.4 Run unit on load for 2 hours to show load carrying ability, stability of voltage and frequency and satisfactory performance of engine ventilation system to provide adequate engine cooling.

3.3 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.4 MAINTENANCE - CLEARANCES

.1 Provide clearance around systems, equipment and components for observation of operation, inspection, servicing, maintenance and as recommended by manufacturer and CSA-B139 NFC.

END OF SECTION