



**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving - PWGSC / Réception des soumissions**  
**- TPSGC**  
**11 Laurier St. / 11, rue Laurier**  
**Place du Portage, Phase III**  
**Core 0B2 / Noyau 0B2**  
**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**  
Vehicles & Industrial Products Division  
11 Laurier St./11, rue Laurier  
7A2, Place du Portage, Phase III  
Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> Cooling unit Upgrade	
<b>Solicitation No. - N° de l'invitation</b> EP916-170713/B	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> 20170713	<b>Date</b> 2016-09-13
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HP-918-71513	
<b>File No. - N° de dossier</b> hp918.EP916-170713	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2016-09-28</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Huda Dahir	<b>Buyer Id - Id de l'acheteur</b> hp918
<b>Telephone No. - N° de téléphone</b> (873) 469-3330 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

**ANNEX “A” - PUBLIC SERVICES AND PROCUREMENT CANADA –  
COOLING UNIT SPECIFICATIONS  
Revision No. 1, September 13, 2016**

<b>TYPICAL SPECIFICATION FOR AIR CONDITIONING SYSTEM (AC-1 and AC-2) and (COND-1 and COND-2) Project No. R.065220, Bldg 475 Uplands</b>		
	<b>MET</b>	<b>NOT MET</b>
<b>1.0 TYPICAL for AC-1 and ac-2</b> The Critical Cooling system must be self-contained, factory-assembled unit with down flow air delivery. The system must have a net total cooling capacity in the range between 48.9 – 55.5 KW with a net sensible cooling capacity in the range between 44.0 – 50.5 KW based on an entering air temperature of 24°C dry bulb and 16°C wet bulb, 45% RH. The unit must be supplied with 575 volt 3 ph 60 Hz electrical service. Net capacities must include losses due to fan motor heat. The system cooling capacity must be factory-certified per ASHRAE127-2007.		
<b>2.0 Frame</b> The frame must be MIG welded, formed sheet metal. It must be protected against corrosion either using the auto-phonetic coating process or hot zinc plated sheet metal.		
<b>3.0 DOWN FLOW AIR SUPPLY</b> The supply air must exit from the bottom of the unit; the return air must enter the unit from the top.		
<b>4.0 EXTERIOR PANELS</b> The exterior panels must be insulated with a minimum 25mm, 0.68 kg density fiber insulation. The main front panel must have captive 1/4 turn fasteners.		
<b>5.0 FILTERS</b> The filter chamber must be located within the cabinet, and filters must be removable from the top of the unit. Filters must be arranged in a V-bank configuration to minimize air pressure drop. Filters must be deep pleated 100mm filters with an ASHRAE 52.2 MERV8 rating (45% ASHRAE 52.1)		
<b>6.0 FAN SECTION</b> The blower section must be either belt driven or direct drive and capable of producing air flow rate in a range between 3200 - 3540 l/s at an		

external static pressure of 50pa. The fans must be the centrifugal type, double-width and double-inlet, and must be dynamically balanced as a completed assembly. The shaft must be heavy duty steel with self-aligning, permanently sealed, pillow block bearings with a minimum L3 life of 200,000 hours. The fans must draw air through the V-frame coil to ensure even air distribution and maximum coil performance. A static regain duct must be factory-installed on the bottom of the blower.		
<b>7.0 MOTOR</b> The fan motor must be Open Drip-Proof, Premium efficiency and must meet NEMA Premium standard, 60Hz. The motor must be removable from the front of the cabinet.		
<b>8.0 DRIVE PACKAGE</b> The unit must be equipped with either electronically communicated variable speed direct drive or belt drive package. Drive package must be sized for 200% of the fan motor horsepower. An auto-tension system must provide constant tension on the belt package.		
<b>9.0 INFRARED HUMIDIFIER</b> A humidifier must be factory-installed inside the unit. Bypass air slots must be included to enable moisture to be absorbed into the air stream. The humidifier capacity must be a minimum of 10 Kg./hr. The humidifier must be removable from the front of the cabinet. The humidifier must be either infrared type or modulating steam generating type with disposable canister. The infrared humidifier type consists of high-intensity quartz lamps mounted above and out of the water supply. The humidifier pan must be stainless steel and arranged to be removable without disconnecting high-voltage electrical connections. The complete humidifier section must be pre-piped, ready for field connection to the water supply. The humidifier must be equipped with an automatic water supply system and must have an adjustable water-overfeed to prevent mineral precipitation. A high-water detector must shut down the humidifier to prevent overflowing. A factory-provided air-gap must prevent backflow of the humidifier supply water.		
<b>10.0 REHEAT</b> The environmental control unit must include a factory-installed reheat to control temperature during dehumidification. The electric reheat coils must be low watt density, 304/304 stainless steel fin tubular construction, protected by thermal safety switches, must be in a range between 10-15 kW and controlled in three stages. The reheat elements must be removable from the front of the cabinet.		
<b>11.0 DUAL REFRIGERATION SYSTEM</b>		

Each unit must include two (2) independent refrigeration circuits and must include liquid line filter dryers, refrigerant sight glass with moisture indicator, externally equalized expansion valves and liquid line solenoid valves. Compressors must be located outside the airstream and must be removable and serviceable from the front of the unit.		
<b>12.0 SCROLL COMPRESSORS</b> The compressor must be scroll-type. The compressor must be suction gas cooled motor, vibration isolators, thermal overloads, automatic reset high pressure switch with lockout after three failures, rotalock service valves, pump down low pressure transducer, suction line strainer and a maximum operating speed of 3500 RPM.		
<b>13.0 CRANKCASE HEATERS</b> The compressors must include crankcase heaters, powered from the indoor unit electric panel.		
<b>14.0 EVAPORATOR COIL</b> The evaporator coil must be either "A-frame" design with offset orientation or slab coil with hydrophilic coating design for avoiding condensation carry over. It must be constructed of rifled copper tubes and aluminum fins and must have a maximum face velocity of 1.63 m per second at 3540 l/s. A stainless steel condensate drain pan must be provided.		
<b>15.0 R-407C REFRIGERANT</b> The system must be designed for use with either R-407C refrigerant or R-410A, which meets the EPA clean air act for phase-out of HCFC refrigerants.		

## 16.0 MICROPROCESSOR CONTROL

Built-in microprocessor-based with color touch screen display and mounted in an ergonomic, aesthetically pleasing housing. The display and housing must be viewable while the front panel is open or closed. The controls must be menu-driven. The system must display user menus such as for active alarms, event log, graphic data, unit view/status overview (including the monitoring of room conditions, operational status in percentage of each function, date and time), total run hours, various sensors, display setup and service contacts. A password must be required to make system changes. Service menus include set points, standby settings (lead/lag), timers/sleep mode, alarm setup, sensor calibration, maintenance/wellness settings, options setup, system/network setup, auxiliary boards and diagnostics/service mode.

- **Password Protection** – Requires two unique passwords to protect against unauthorized changes. An auto hide/show feature must allow the user to see applicable information based on the login used.
- **Unit Backup and Restore** – Enable to create safe copies of important control parameters. It must have the capacity for the user to automatically backup unit configuration settings to internal memory or USB storage drive.
- **Parameter Download** – It must enable the user to download a report that lists parameter names, factory default settings and user programmed settings for remote reference.
- **Display Setup** – Enable to configure the display information based on the specific user's preference.
- **Additional Readouts** - To enable the user to configure custom widgets on the main screen, such as fan speed, call for cooling, maintenance status, call for electric reheat, call for dehumidification, call for humidification, airflow, static pressure, fluid flow rate and cooling capacity.
- **Status LED's** – To show the unit's operating status using an integral LED. The LED indicates if the unit has an active alarm; if the unit has an active alarm that has been acknowledged; or if the unit is On, Off or in standby status.
- **Event Log** – Enable to store the last events automatically (messages, warnings, and alarms).
- **Service Contact Information** – To store the local service or sales contact information.
- **Upgradeable** – Enable to perform update through a USB connection.
- **Timers/Sleep Mode** – Enable to program various customer settings for turning the unit On or Off.
- **Menu Layout** - User screen to access parameters required for basic unit control and setup. The screen must be designed for service personnel and must provide access to advanced control setup features and diagnostic information.
- **Sensor Calibration** - The menus must allow unit sensors to be calibrated with external sensors.

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<ul style="list-style-type: none"> <li>• <b>Maintenance/Wellness Settings</b> – To allow reporting of potential component problems before they occur.</li> <li>• <b>Options Setup</b> - The menus must provide operation settings for the installed components.</li> <li>• <b>Auxiliary Boards</b> – Enable to setup of optional expansion boards.</li> <li>• <b>Various Sensors:</b> Enable to setup and display of optional custom sensors.</li> <li>• <b>Diagnostics/Service Mode</b> – Enable to provided with self-diagnostics to aid in troubleshooting. The microcontroller board must be diagnosed and reported as pass/not pass. Control inputs must be indicated as On or Off at the front display. Control outputs must be able to be turned On or Off from the front display without using jumpers or a service terminal. Each control output must be indicated by an LED on a circuit board.</li> </ul>	
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<b>17.0 ALARMS</b> All unit alarms must be annunciated through both audio and visual cues, clearly displayed on the screen, automatically recorded in the event log and communicated to the customers Building Management System/Building Automation System. It must activate an audible and visual alarm in event of any of the following conditions: <ul style="list-style-type: none"> <li>• High Temperature</li> <li>• Low Temperature</li> <li>• High Humidity</li> <li>• Low Humidity</li> <li>• Change Filters</li> <li>• Loss of Air Flow</li> <li>• Loss of Power</li> <li>• Humidifier Problem</li> <li>• High Head Pressure</li> <li>• Low Suction Pressure</li> <li>• Custom Alarms</li> </ul> Each alarm (unit and custom) must be separately enabled or disabled, selected to activate the common alarm and programmed for a time delay of 0 to 255 seconds.		
<b>18.0 STANDBY LEAD-LAG</b> It must allow scheduled rotation to keep equal run time on units and provide automated emergency rotation of operating and standby units.		
<b>19.0 Locking Disconnect Switch</b> The manual disconnect switch must be mounted in the high-voltage section of the electrical panel. The switch must be accessible from the outside of the unit with the door closed and must prevent access to the high-voltage electrical components until switched to the Off position.		
<b>20.0 Seismic Rated Floor Stand</b> The floor stand must be seismic rated and must be bolted to the unit frame.		
<b>21.0 Floor Stand Turning Vane</b> A turning vane must be supplied with the floor stand and must be designed for the specified floor stand height.		
<b>22.0 Air-Cooled Systems</b>		

The indoor evaporator unit must include refrigerant piping, with a factory holding charge of nitrogen. The hot-gas and liquid lines must be spun shut and must include a factory-installed Schrader valve. Field-relief of the Schrader valve must indicate a leak-free system.		
<b>TYPICAL FOR COND-1 and COND-2</b>		
<b>23.0 Air-Cooled Condenser</b> The roof mounted outdoor air-cooled condenser must be the low profile, multiple direct drives, propeller fan type. The condenser must balance the heat rejection of the compressor at 35°C. The condenser must be constructed of aluminum and contain a copper tube, aluminum fin coil arranged for vertical air discharge. Electrical: 575 Volt, 3-phase, 60 Hz.		
<b>24.0 Winter Control System</b> The winter control system for the air-cooled condenser package must allow startup and positive head pressure control with ambient temperatures as low as -34.4°C. The package must include the following components for each refrigeration circuit: insulated receiver, pressure relief valve, head pressure three-way control valve and rotalock valve for isolating the refrigerant charge. The receiver must be factory-insulated and mounted ready for the field-connection to the air-cooled condenser. The heater must require a separate power supply of 120 volt, single phase, 60 Hz, each heater, requires two heaters.		
<b>25.0 Condenser Disconnect Switch</b> A disconnect switch must be factory-mounted and wired to the condenser control panel, accessible from the exterior.		
<b>PHYSICAL OVERALL DIMENSIONS</b>		
<b>26.0 TYPICAL for AC-1 and ac-2</b> The overall dimensions must be not more than 2000mm high x 950mm deep x 2650mm long with a minimum 900mm maintenance access must be at the front and both sides of the unit.		
<b>27.0 TYPICAL for COND-1 and COND-2</b> The overall dimensions must be not more than 3200mm long x 1500mm wide x 1300mm high. Maintenance access must be at all sides and top of the unit.		

Solicitation No. - N° de l'invitation  
EP916-170713/B

Amd. No. - N° de la modif.  
001

Buyer ID - Id de l'acheteur  
hp918

Client Ref. No. - N° de réf. du client  
EP916-170713

File No. - N° du dossier  
hp918.EP916-170713

CCC No./N° CCC - FMS No/ N° VME

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Solicitation Amendment 001 is raised to amend the following:

**DELETE:** Annex "A" in its entirety

**INSERT:** Annex "A" – Revision 1, dated September 13, 2016

**ALL OTHER TERMS AND CONDITIONS OF THIS SOLICITATION REMAIN UNCHANGED**