



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Travaux publics et Services gouvernementaux
Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7^{ème} étage
Montréal
Québec
H5A 1L6
FAX pour soumissions: (514) 496-3822

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
Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7^{ème} étage
Montréal
Québec
H5A 1L6

Title - Sujet Electric generator	
Solicitation No. - N° de l'invitation W0130-15M308/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client W0130-15M308	Date 2016-02-02
GETS Reference No. - N° de référence de SEAG PW-\$MTA-309-13717	
File No. - N° de dossier MTA-5-38315 (309)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-03-07	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Paradis, Mary	Buyer Id - Id de l'acheteur mta309
Telephone No. - N° de téléphone (514) 496-3874 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DE LA DEFENSE NATIONALE Garnison de Saint-Hubert 4820 Leckie Saint -Hubert Québec J3Z 1H6 Canada	

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

THE ABOVE MENTIONED REQUEST FOR PROPOSAL HAS BEEN MODIFIED AS FOLLOWS:

DELETE:

ANNEX "A"

STATEMENT OF REQUIREMENT

THE PURCHASE, DELIVERY AND INSTALLATION OF AN ELECTRIC GENERATOR

PART 1: REQUIREMENT

1. Need

Request for Proposal to purchase an electric generator including delivery and installation and start-up (turnkey).

2. Delivery

Saint-Hubert Garrison
4820 rue Léckie
St-Hubert (Québec)
J3Z 1H6

3. Application

GENERATOR SET

1 - General:

Supply a CSA generator set capable of 100% one step loading. The installation must comply with CSA/CSA-C282 and CAN/CSA-B139.

2- Supplier qualifications:

The supplier must offer a 24 hours /365 days service; be involved in generator business for a minimum of 5 years ; have a licence from RBQ (Régie de bâtiment du Quebec) or equivalent and CMEQ (Corporation des Maîtres Électriciens du Québec) or equivalent ; have an engineer member of "Ordre des ingénieurs du Québec" or equivalent in his team; have a minimum of 2 technicians on the road and be equipped with a computerized test cell .

3- Capacity of the generator:

125kW, 156,25kVA standby, 60Hz, 3ph, 4W, 347/600V.

4- Engine:

Diesel, liquid cooled, 147 BHP @ 1800RPM, EPA tier 3.

5- Cooling:

Unit mounted 50°C radiator with maximum air flow of 218,3 m³/min @ 125 PA restriction.
Accessories: duct flange, protective guards, coolant, drain valve (for radiator and engine), 1500W/120V block heater.

6- Lubrication:

Drain valve and extension hose, first fill and closed crankcase vent.

7- Governor:

Isochronous with ± 0.25% stability at steady state.

8- DC electrical system:

12V battery charging alternator, 850 CCA battery, battery rack, 12V/6A battery charger with 3 charging rate pilot lights, reverse polarity and short-circuit protection, input range from 90 to 135Vac, 2500V insulation between input and output.

9- Exhaust:

Stainless steel exhaust flexible, critical silencer with drain plug.

10- Frame:

The skid frame and the radiator must be vibration isolated from the engine-alternator assembly.

11- Control panel (MGC-1500):

The control panel must be microprocessor based, able to operate in the range of -40°C to 70°C, shall be UL 508R and CSA C22.2 no 14 approved. It must be equipped of a LCD display with backlight, pushbuttons (edit, arrow, reset, run, off, auto, alarm silence, lamp test), indicators (supplying load, alarm, not in auto, operating mode), and alarm horn. A generator set shutdown must be activated in the following conditions: low oil pressure, high engine temperature, low water level, low fuel level, over speed, over crank, engine sender failure, fuel level sender failure, fuel leak, emergency stop, critical low fuel shutdown, under/overvoltage, reverse power, under /over-frequency, loss of excitation. An alarm must be activated without generator set shutdown in the following conditions: low oil pressure pre-alarm, high engine temperature pre-alarm, low water temperature, battery overvoltage, weak battery, battery charger failure, main breaker open, engine sender failure, kW overload (3 levels), maintenance interval timer, low coolant level, low fuel level, fuel leak, high fuel level.

The following metering must be provided: V, A, Hz, kW, kVA, PF, oil pressure, engine temperature, RPM, battery voltage, fuel level, run timer, number of successful engine starts, data from J1939 communication port. Other functionalities: date and time stamped failure history, transfer switch control, RS-485 communication port (Modbus-RTU protocol), programmable logic with timers and logic gates, J1939 communication with engine, 6 programmable digital inputs, programmable output contacts (3 x 5A et 4 X 2A).

12- Alternator:

150kW /187,5 KVA, 347/600 V , class H insulation, 150°C temperature rise, brushless PMG excitation, 390 SKVA @ 35% voltage dip. Provide 1 x 150A breakers, one with position contact wired to the control panel.

13- Fuel:

#2 diesel, 2.7m lift fuel pump, manual priming pump, primary and secondary fuel filters, water separator. Metallic flexible fuel lines, ULC-842 isolation valve installed directly on the tank on the fuel supply line. The plumber must extend the normal and emergency vents and the fill pipes to the outside of the building. Accessories: sealed level gauge, 240-30 Ω level sender and leak contact (wired to the control panel), whistle, emergency pressure relief vent.

14- Transfer switches Asco

Contact type, mechanically shield, in a NEMA 1 enclosure, 347/600V, continuous rating of 200A 3P, 4W, 60Hz, WCR of 10kA (with coordinated breaker). The control must include: inphase monitor, normal and emergency 3ph programmable protections (for under/over-voltage, under/over-frequency, phase rotation and imbalance), programmable delays (TDES, TDNE, TDEN, TDEC, pretransfer), programmable exerciser with/without load. Test and programming buttons, neutral bar, dry contacts (position and pretransfer). A digital display must indicate system status, voltage, frequency, event log, programming, etc. CSA 22.2 no 178 and UL-1008 approved.

15- Poster:

Supply a poster labelling "Ce groupe électrogène peut démarrer à tout moment. DANGER. This automatic unit may start at any time."

16- Documents:

Complete PDF technical and parts drawings of the generator and 3 operation and maintenance manuals in CD format.

17- Labeling:

Provide the label required by the CSA C282 indicating a value of 180 kW.

18 - Factory test:

Check for leaks and fluid levels. Make a visual inspection of the set. Read the block heater cold resistance, and verify that the thermostat opens as the engine warms up. Verify the control panel protections. Adjust the governor frequency, the generator voltage, and the V/Hz setting. Verify that the battery charging alternator runs properly. Verify the generator capability to carry full load.

19 - Start-up:

Verify that the emergency system installation complies with the manufacturer requirements.

Test the generator as per CAN/CSA C282-05 requirements. This test must include an hour of running with the building load, followed by 1 hour at 200 kW, and 3 hours at 180kW using a load bank. Provide a report according to CAN/CSA C282. Demonstrate the 100% one step loading capability.

20- Warranty:

2 year / 3000 hours on parts, labor, and traveling expenses. The warranty will begin with the first commissioning. Any deductible shall be at the generator supplier's expense.

21- Soundproof shelter:

The silencer must be located inside the shelter. It has doors on hinges with locking handles surface mounted. The shelter has gratings and baffles restricting entry of water and snow in the shelter. The roof has a slope on both sides allowing the flow of water. The acoustic insulation meets UL 94. The shelter must withstand winds of 160 km / h. The average noise level around the shelter will 81,5dBa @ 7m.

22- Training:

The supplier of the electronic generator will the train the personnel that will be handling this unit, in its operation and maintenance. The training will be given during normal working hours from Monday to Friday. A demonstration of the emergency system will be given in the field.

PARTIE 2 – EXÉCUTION

1- General

The installation must be done by qualified employees. The technician(s) must have at least two (2) years experience to work with this type of generator.

2- Delivery

The generator will be delivered directly to the area of installation.

3- Installation

Ensure that the generator is installed at the required place as indicated in the Request for Proposal. .

4- Start-up

Ensure that the generator is working at one hundred (100%) percent capacity before leaving the area.

INSERT:

ANNEX "A"

STATEMENT OF REQUIREMENT

THE PURCHASE, DELIVERY AND INSTALLATION OF AN ELECTRIC GENERATOR

PART 1: REQUIREMENT

1. Need

Request for Proposal to purchase an electric generator including delivery and installation and start-up (turnkey).

2. Delivery

Saint-Hubert Garrison
4820 rue Léckie
St-Hubert (Québec)
J3Z 1H6

3. Application

GENERATOR SET

1 - General:

Supply a CSA generator set capable of 100% one step loading. The installation must comply with CSA/CSA-C282 and CAN/CSA-B139.

2- Supplier qualifications:

The supplier must offer a 24 hours /365 days service; be involved in generator business for a minimum of 5 years ; have a licence from RBQ (Régie de bâtiment du Quebec) or equivalent and CMEQ (Corporation des Maîtres Électriciens du Québec) or equivalent ; have an engineer member of "Ordre des ingénieurs du Québec" or equivalent in his team; have a minimum of 2 technicians on the road and be equipped with a computerized test cell .

3- Capacity of the generator:

Supply a 125kW, 156,25kVA standby, 60Hz, 3ph, 4W, 347/600V.

4- Engine:

Diesel, liquid cooled, 147 BHP @ 1800RPM, EPA tier 3.

5- Cooling:

Unit mounted 50°C radiator with maximum air flow of 218,3 m³/min @ 125 PA restriction.
Accessories: duct flange, protective guards, coolant, drain valve (for radiator and engine), 1500W/120V block heater.

6- Lubrication:

Drain valve and extension hose, first fill and closed crankcase vent.

7- Governor:

Isochronous with $\pm 0.25\%$ stability at steady state.

8- DC electrical system:

12V battery charging alternator, 850 CCA battery, battery rack, 12V/6A battery charger with 3 charging rate pilot lights, reverse polarity and short-circuit protection, input range from 90 to 135Vac, 2500V insulation between input and output.

9- Exhaust:

Stainless steel exhaust flexible, critical silencer with drain plug.

10- Frame:

The skid frame and the radiator must be vibration isolated from the engine-alternator assembly.

11- Control panel (MGC-1500):

The control panel must be microprocessor based, able to operate in the range of -40°C to 70°C, shall be UL 508R and CSA C22.2 no 14 approved. It must be equipped of a LCD display with backlight, pushbuttons (edit, arrow, reset, run, off, auto, alarm silence, lamp test), indicators (supplying load, alarm, not in auto, operating mode), and alarm horn. A generator set shutdown must be activated in the following conditions: low oil pressure, high engine temperature, low water level, low fuel level, over speed, over crank, engine sender failure, fuel level sender failure, fuel leak, emergency stop, critical low fuel shutdown, under/overvoltage, reverse power, under /over-frequency, loss of excitation. An alarm must be activated without generator set shutdown in the following conditions: low oil pressure pre-alarm, high engine temperature pre-alarm, low water temperature, battery overvoltage, weak battery, battery charger failure, main breaker open, engine sender failure, kW overload (3 levels), maintenance interval timer, low coolant level, low fuel level, fuel leak, high fuel level.

The following metering must be provided: V, A, Hz, kW, kVA, PF, oil pressure, engine temperature, RPM, battery voltage, fuel level, run timer, number of successful engine starts, data from J1939 communication port. Other functionalities: date and time stamped failure history, transfer switch control, RS-485 communication port (Modbus-RTU protocol), programmable logic with timers and logic gates, J1939 communication with engine, 6 programmable digital inputs, programmable output contacts (3 x 5A et 4 X 2A).

12- Alternator:

Alternator with the characteristics of 150kW at 150°C. brushless PMG excitation, 390 SKVA @ 35% voltage dip. Provide 1 x 150A breakers, one with position contact wired to the control panel.

13- Fuel:

#2 diesel, 2.7m lift fuel pump, manual priming pump, primary and secondary fuel filters, water separator. Metallic flexible fuel lines, ULC-842 isolation valve installed directly on the tank on the fuel supply line. The plumber must extend the normal and emergency vents and the fill pipes to the outside of the building. Accessories: sealed level gauge, 240-30 Ω level sender and leak contact (wired to the control panel), whistle, emergency pressure relief vent.

14- Transfer switches Asco

Contact type, mechanically shield, in a NEMA 1 enclosure, 347/600V, continuous rating of 200A 3P, 4W, 60Hz, WCR of 10kA (with coordinated breaker). The control must include: inphase monitor, normal and emergency 3ph programmable protections (for under/over-voltage, under/over-frequency, phase rotation and imbalance), programmable delays (TDES, TDNE, TDEN, TDEC, pretransfer), programmable exerciser with/without load. Test and programming buttons, neutral bar, dry contacts (position and pretransfer). A digital display must indicate system status, voltage, frequency, event log, programming, etc. CSA 22.2 no 178 and UL-1008 approved.

15- Poster:

Supply a poster labelling "Ce groupe électrogène peut démarrer à tout moment. DANGER. This automatic unit may start at any time."

16- Documents:

Complete PDF technical and parts drawings of the generator and 3 operation and maintenance manuals in CD format.

17- Labeling:

Provide the label required by the CSA C282 indicating a value of 112.5 kW.

18 - Factory test:

Check for leaks and fluid levels. Make a visual inspection of the set. Read the block heater cold resistance, and verify that the thermostat opens as the engine warms up. Verify the control panel protections. Adjust the governor frequency, the generator voltage, and the V/Hz setting. Verify that the battery charging alternator runs properly. Verify the generator capability to carry full load.

19 - Start-up:

Verify that the emergency system installation complies with the manufacturer requirements.

Test the generator as per CAN/CSA C282-05 requirements. It includes four (4) hours at 112.5 kW and must demonstrate that it can take a single charge at 125 kW. Provide a report according to CAN/CSA C282. Demonstrate the 100% one step loading capability.

20- Warranty:

2 year / 3000 hours on parts, labor, and traveling expenses. The warranty will begin with the first commissioning. Any deductible shall be at the generator supplier's expense.

21- Soundproof shelter:

The silencer must be located inside the shelter. It has doors on hinges with locking handles surface mounted. The shelter has gratings and baffles restricting entry of water and snow in the shelter. The roof has a slope on both sides allowing the flow of water. The acoustic insulation meets UL 94. The shelter must withstand winds of 160 km / h. The average noise level around the shelter will 81,5dBa @ 7m.

22- Training:

The supplier of the electronic generator will the train the personnel that will be handling this unit, in its operation and maintenance. The training will be given during normal working hours from Monday to Friday. A demonstration of the emergency system will be given in the field.

PARTIE 2 – EXÉCUTION

1- General

The installation must be done by qualified employees. The technician(s) must have at least two (2) years experience to work with this type of generator.

2- Delivery

The generator will be delivered directly to the area of installation.

3- Installation

Ensure that the generator is installed at the required place as indicated in the Request for Proposal. .

4- Start-up

Ensure that the generator is working at one hundred (100%) percent capacity before leaving the area.

DELETE:

ANNEXE 'C'

MANDATORY TECHNICAL EVALUATION CRITERIA

The information that figures in this table must be duly completed and submitted **at the closing date and hour of the solicitation.**

All the criteria identified below are MANDATORY.

For the PRODUCT being offered, each criteria must be met and accompanied with technical specifications, user manuals or other to explain and prove that each criteria will be met.

OTHER technical mandatory evaluation criteria in this grid have also to be demonstrated such as: Supplier qualifications (item no. 2), poster(item no. 15) , documents(item no. 16) , labeling(item no. 17), factory test (item no. 18), start-up (item no. 19), warranty (item no. 20)and training (item no. 22). We need to know how your firm will meet these criteria. Please provide details.

Failure to meet all of the mandatory technical criteria listed below will render your proposal non responsive. No further consideration will be given to your Proposal.

Please provide substantiating documents/cross reference to proposal for the following criteria:

1. Mandatory Technical Specifications:

Description	Identify where the substantiating document /cross reference to proposal is located in the bid package.
1 - General: Supply a CSA generator set capable of 100% one step loading. The installation must comply with CSA/CSA-C282 and CAN/CSA-B139.	
2-Supplier Qualifications : The supplier must: -offer a 24 hours /365 days service; - be involved in generator business for a minimum of 5 years; - have a licence from RBQ (Regie de bâtiment du Québec) and CMEQ (Corporation des maîtres électriciens du Québec) or equivalent ; - have an engineer member of "Ordre des ingénieurs du Québec" or equivalent in his team; - have a minimum 5 technicians on the road; - be equipped with a computerized test cell. - Provide curriculum vitae for two qualified technicians with your bid. Must have a minimum of 2 years of experience with this type of generator.	
3- Capacity: 125kW, 156,25kVA standby, 60Hz, 3ph, 4W, 347/600V.	
4- Engine: Diesel, liquid cooled, 147 BHP @ 1800RPM, EPA tier 3.	

Solicitation No. - N° de l'invitation
W0130-15-M308/A
Client Ref. No. - N° de réf. du client
W0130-15-M308

Amd. No. - N° de la modif
02
File No. - N° du dossier
MTA-5-38315

Buyer ID - Id de l'acheteur
MTA 309
CCC No./N° CCC - FMS No./N° VME

<p>5- Cooling: Unit mounted 50°C radiator with maximum air flow of 218,3 m³/min @ 125 PA restriction. Accessories: duct flange, protective guards, coolant, drain valve (for radiator and engine), 1500W/120V block heater.</p>	
<p>6- Lubrication: Drain valve and extension hose, first fill and closed crankcase vent.</p>	
<p>7- Governor: Isochronous with ± 0.25% stability at steady state.</p>	
<p>8- DC electrical system : 12V battery charging alternator, 850 CCA battery, battery rack, 12V/6A battery charger with 3 charging rate pilot lights, reverse polarity and short-circuit protection, input range from 90 to 135Vac, 2500V insulation between input and output.</p>	
<p>9- Exhaust: Stainless steel exhaust flexible, critical silencer with drain plug.</p>	
<p>10- Frame: The skid frame and the radiator must be vibration isolated from the engine-alternator assembly.</p>	
<p>11- Control panel: (mgc-1500): The control panel must be microprocessor based, able to operate in the range of -40°C to 70°C, shall be UL 508R and CSA C22.2 no 14 approved. It must be equipped of a LCD display with backlight, pushbuttons (edit, arrow, reset, run, off, auto, alarm silence, lamp test), indicators (supplying load, alarm, not in auto, operating mode), and alarm horn. A generator set shutdown must be activated in the following conditions: low oil pressure, high engine temperature, low water level, low fuel level, over speed, over crank, engine sender failure, fuel level sender failure, fuel leak, emergency stop, critical low fuel shutdown, under/overvoltage, reverse power, under/over-frequency, loss of excitation. An alarm must be activated without generator set shutdown in the following conditions: low oil pressure pre-alarm, high engine temperature pre-alarm, low water temperature, battery overvoltage, weak battery, battery charger failure, main breaker open, engine sender failure, kW overload (3 levels), maintenance interval timer, low coolant level, low fuel level, fuel leak, high fuel level. The following metering must be provided: V, A, Hz, kW, kVA, kVAR, PF, oil pressure, engine temperature, RPM, battery voltage, fuel level, run timer, number of successful engine starts, data from J1939 communication port. Other functionalities: date and time stamped failure history, transfer switch control, RS-485 communication port (Modbus-RTU protocol), programmable logic with timers and logic gates, J1939 communication with engine, 17 programmable digital inputs, programmable output contacts (3 x 5A et 4 x 2A).</p>	
<p>12- Alternator: 150 KW /187,5 KVA, 347/ 600 V, Class H insulation , 150°C temperature rise, brushless PMG excitation, 390 SKVA @ 35% voltage dip. Provide 1 x 150A breakers, one with position contact wired to the control panel.</p>	
<p>13- Fuel: #2 diesel, 2.7m lift fuel pump, manual priming pump, primary and secondary fuel filters, water separator. Metallic flexible fuel lines, ULC-842 isolation valve installed directly on the tank on the fuel supply line. The plumber must extend the normal and emergency vents and the fill pipes to the outside of the building. Accessories: sealed level gauge, 240-30 Ω level sender and leak contact (wired to the control panel), whistle, emergency pressure relief vent.</p>	

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W0130-15-M308/A
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W0130-15-M308

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File No. - N° du dossier
MTA-5-38315

Buyer ID - Id de l'acheteur
MTA 309
CCC No./N° CCC - FMS No./N° VME

<p>14- Transfer switches Asco: Contactor type, mechanically shield, in a NEMA 1 enclosure, 347/600V, continuous rating of 200A 3P, 4W, 60Hz, WCR of 10kA (with coordinated breaker). The control shall include: inphase monitor, normal and emergency 3ph programmable protections (for under/over-voltage, under/over-frequency, phase rotation and imbalance), programmable delays (TDES, TDNE, TDEN, TDEC, pretransfer), programmable exerciser with/without load. Test and programming buttons, neutral bar, dry contacts (position and pretransfer). A digital display shall indicate system status, voltage, frequency, event log, programming, etc. CSA 22.2 no 178 and UL-1008 approved.</p>	
<p>15- Poster: Supply a poster labelling "Ce groupe électrogène peut démarrer à tout moment. DANGER. This automatic unit may start at any time."</p>	
<p>16- Documents: Complete PDF technical and parts drawings of the generator , and 3 operation and maintenance manuals in CD format.</p>	
<p>17- Labeling : Provide the label required by the CSA C282 indicating a value of 180 kW.</p>	
<p>18 - Factory test: Check for leaks and fluid levels. Make a visual inspection of the set. Read the block heater cold resistance, and verify that the thermostat opens as the engine warms up. Verify the control panel protections. Adjust the governor frequency, the generator voltage, and the V/Hz setting. Verify that the battery charging alternator runs properly. Verify the generator capability to carry full load.</p>	
<p>19 - Start-up: Verify that the emergency system installation complies with the manufacturer requirements. Test the generator as per CAN/CSA C282-05 requirements. This test must include an hour of running with the building load, followed by 1 hour at 200 kW, and 3 hours at 180 kW using a load bank. Provide a report according to CAN/CSA C282. Demonstrate the 100% one step loading capability.</p>	
<p>20- Warranty: 2 year / 3000 hours on parts, labor, and traveling expenses. The warranty will begin with the first commissioning. Any deductible shall be at the generator supplier's expense.</p>	
<p>21- Soundproof shelter: The silencer must be located inside the shelter. It has doors on hinges with locking handles surface mounted. The shelter has gratings and baffles restricting entry of water and snow in the shelter. The roof has a slope on both sides allowing the flow of water. The acoustic insulation meets UL 94. The shelter must withstand winds of 160 km / h. The average noise level around the shelter will 81,5dBa @ 7m.</p>	
<p>22- Training: The supplier of the electronic generator will the train the personnel that will be handling this unit, in its operation and maintenance. The training will be given during normal working hours from Monday to Friday. A demonstration of the emergency system will be given in the field.</p>	

INSERT:

VERSION NO 2

ANNEXE 'C'

MANDATORY TECHNICAL EVALUATION CRITERIA

The information that figures in this table must be duly completed and submitted **at the closing date and hour of the solicitation.**

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Please provide substantiating documents/cross reference to proposal for the following criteria:

2. Mandatory Technical Specifications:

Description	Identify where the substantiating document /cross reference to proposal is located in the bid package.
1 - General: Supply a CSA generator set capable of 100% one step loading. The installation must comply with CSA/CSA-C282 and CAN/CSA-B139.	
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3- Capacity: Supply a 125kW, 156,25kVA standby, 60Hz, 3ph, 4W, 347/600V.	

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MTA-5-38315

Buyer ID - Id de l'acheteur
MTA 309
CCC No./N° CCC - FMS No./N° VME

<p>4- Engine: Diesel, liquid cooled, 147 BHP @ 1800RPM, EPA tier 3.</p>	
<p>5- Cooling: Unit mounted 50°C radiator with maximum air flow of 218,3 m³/min @ 125 PA restriction. Accessories: duct flange, protective guards, coolant, drain valve (for radiator and engine), 1500W/120V block heater.</p>	
<p>6- Lubrication: Drain valve and extension hose, first fill and closed crankcase vent.</p>	
<p>7- Governor: Isochronous with ± 0.25% stability at steady state.</p>	
<p>8- DC electrical system : 12V battery charging alternator, 850 CCA battery, battery rack, 12V/6A battery charger with 3 charging rate pilot lights, reverse polarity and short-circuit protection, input range from 90 to 135Vac, 2500V insulation between input and output.</p>	
<p>9- Exhaust: Stainless steel exhaust flexible, critical silencer with drain plug.</p>	
<p>10- Frame: The skid frame and the radiator must be vibration isolated from the engine-alternator assembly.</p>	
<p>11- Control panel: (mgc-1500): The control panel must be microprocessor based, able to operate in the range of -40°C to 70°C, shall be UL 508R and CSA C22.2 no 14 approved. It must be equipped of a LCD display with backlight, pushbuttons (edit, arrow, reset, run, off, auto, alarm silence, lamp test), indicators (supplying load, alarm, not in auto, operating mode), and alarm horn. A generator set shutdown must be activated in the following conditions: low oil pressure, high engine temperature, low water level, low fuel level, over speed, over crank, engine sender failure, fuel level sender failure, fuel leak, emergency stop, critical low fuel shutdown, under/overvoltage, reverse power, under/over-frequency, loss of excitation. An alarm must be activated without generator set shutdown in the following conditions: low oil pressure pre-alarm, high engine temperature pre-alarm, low water temperature, battery overvoltage, weak battery, battery charger failure, main breaker open, engine sender failure, kW overload (3 levels), maintenance interval timer, low coolant level, low fuel level, fuel leak, high fuel level. The following metering must be provided: V, A, Hz, kW, kVA, kVAR, PF, oil pressure, engine temperature, RPM, battery voltage, fuel level, run timer, number of successful engine starts, data from J1939 communication port. Other functionalities: date and time stamped failure history, transfer switch control, RS-485 communication port (Modbus-RTU protocol), programmable logic with timers and logic gates, J1939 communication with engine, 17 programmable digital inputs, programmable output contacts (3 x 5A et 4 x 2A).</p>	
<p>12- Alternator: Alternator with the characteristics of 150 kW at 150°C , brushless PMG excitation, 390 SKVA @ 35% voltage dip. Provide 1 x 150A breakers, one with position contact wired to the control panel.</p>	
<p>13- Fuel: #2 diesel, 2.7m lift fuel pump, manual priming pump, primary and secondary fuel filters, water separator. Metallic flexible fuel lines, ULC-842 isolation valve installed directly on the tank on the fuel supply line. The plumber must extend the normal and emergency vents and the fill pipes to the outside of the</p>	

Solicitation No. - N° de l'invitation
W0130-15-M308/A
Client Ref. No. - N° de réf. du client
W0130-15-M308

Amd. No. - N° de la modif
02
File No. - N° du dossier
MTA-5-38315

Buyer ID - Id de l'acheteur
MTA 309
CCC No./N° CCC - FMS No./N° VME

<p>building. Accessories: sealed level gauge, 240-30 Ω level sender and leak contact (wired to the control panel), whistle, emergency pressure relief vent.</p>	
<p>14- Transfer switches Asco: Contactor type, mechanically shield, in a NEMA 1 enclosure, 347/600V, continuous rating of 200A 3P, 4W, 60Hz, WCR of 10kA (with coordinated breaker). The control shall include: inphase monitor, normal and emergency 3ph programmable protections (for under/over-voltage, under/over-frequency, phase rotation and imbalance), programmable delays (TDES, TDNE, TDEN, TDEC, pretransfer), programmable exerciser with/without load. Test and programming buttons, neutral bar, dry contacts (position and pretransfer). A digital display shall indicate system status, voltage, frequency, event log, programming, etc. CSA 22.2 no 178 and UL-1008 approved.</p>	
<p>15- Poster: Supply a poster labelling "Ce groupe électrogène peut démarrer à tout moment. DANGER. This automatic unit may start at any time."</p>	
<p>16- Documents: Complete PDF technical and parts drawings of the generator , and 3 operation and maintenance manuals in CD format.</p>	
<p>17- Labeling : Provide the label required by the CSA C282 indicating a value of 112.5 kW.</p>	
<p>18 - Factory test: Check for leaks and fluid levels. Make a visual inspection of the set. Read the block heater cold resistance, and verify that the thermostat opens as the engine warms up. Verify the control panel protections. Adjust the governor frequency, the generator voltage, and the V/Hz setting. Verify that the battery charging alternator runs properly. Verify the generator capability to carry full load.</p>	
<p>19 - Start-up: Verify that the emergency system installation complies with the manufacturer requirements. Test the generator as per CAN/CSA C282-05 requirements. It includes four (4) hours at 112.5 kW and must demonstrate that it can take a single charge at 125 kW. Provide a report according to CAN/CSA C282. Demonstrate the 100% one step loading capability.</p>	
<p>20- Warranty: 2 year / 3000 hours on parts, labor, and traveling expenses. The warranty will begin with the first commissioning. Any deductible shall be at the generator supplier's expense.</p>	
<p>21- Soundproof shelter: The silencer must be located inside the shelter. It has doors on hinges with locking handles surface mounted. The shelter has gratings and baffles restricting entry of water and snow in the shelter. The roof has a slope on both sides allowing the flow of water. The acoustic insulation meets UL 94. The shelter must withstand winds of 160 km / h. The average noise level around the shelter will 81,5dBa @ 7m.</p>	
<p>22- Training: The supplier of the electronic generator will the train the personnel that will be handling this unit, in its operation and maintenance. The training will be given during normal working hours from Monday to Friday. A demonstration of the emergency system will be given in the field.</p>	

- All other terms and conditions remain the same.