



**THE CORPORATION OF THE
TOWNSHIP OF SOUTH GLENGARRY**

PROCUREMENT 2024-17

**SUPPLY OF ONE (1)
PORTABLE GENERATOR**

**ISSUE DATE:
Oct 31, 2024**

**SITE VISIT:
N/A**

**DEADLINE FOR QUESTIONS:
Nov 7, 2024**

**CLOSING DATE:
11:00 am local time on Thursday Nov 14, 2024**

**THE CORPORATION OF THE
TOWNSHIP OF SOUTH GLENGARRY**

PROCUREMENT 2024-17

**SUPPLY OF
ONE (1) PORTABLE GENERATOR**

SUBMISSION CLOSING

Submissions will be received until 1100 hours (11:00 a.m.) local time on Nov 14, 2024, at which time and date shall be deemed to be the date of closing of Submission.

Respondents are required to submit one (1) pdf copy of their submission to clerk@southglengarry.com.

Respondents are required to provide the following information in their covering e-mail:

Attention:	WATER SERVICES
Procurement:	2024-17 SUPPLY OF ONE (1) PORTABLE GENERATOR
Respondent:	<Name>

LATE SUBMISSIONS WILL NOT BE ACCEPTED

SUBMISSION OPENING

An official virtual public opening of submissions will take place **15** minutes following the closing which will be live streamed to the Township's YouTube channel:

<https://www.youtube.com/@townshipofsouthglengarry4658>

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SCOPE OF WORK

The scope of work consists of the following:

- Supply of ONE (1) portable generator, complete with training

Completion of Contract:

The Contractor shall deliver the Deisel Generator no later than Dec 20, 2024.

For further information please contact:

Dillen Seguin,
Director of Water/Wastewater
Township of South Glengarry
Phone: 613-347-1166 ext. 2504
Email: dsequin@southglengarry.com

FORM OF SUBMISSION

PROCUREMENT 2024-17

FOR THE SUPPLY OF: **ONE (1) PORTABLE GENERATOR**

SUBMITTED BY: _____

FIRM NAME

ADDRESS

HEREINAFTER CALLED THE RESPONDENT.

TELEPHONE # _____ **FAX #** _____

**TO: THE CORPORATION OF THE
TOWNSHIP OF SOUTH GLENGARRY
6 Oak Street
Lancaster, Ontario K0C 1N0**

I (we) _____ have carefully examined the site of the proposed work and all Contract documents relating thereto, do hereby Submission all and offer in accordance therewith to enter into a Contract as and when required by the Township of South Glengarry, in strict accordance with the said Contract documents and such further details as may be supplied and to supply all necessary labour, material and plant to complete the work in the time specified for the amount:

The Respondent Agrees

1. To undertake any additional work as required or to accept any deductions from the Contract at the prices quoted in the Schedule of Items and Prices.
2. That this Submission is subject to a formal Contract being prepared and executed.

The Respondent Declares

1. No person, firm or corporation, other than the Respondent, has any interest in this Submission or in the proposed contract for which this Submission is made.
2. This Submission is made without any connection, comparison of figures, or arrangements with, or knowledge of any other corporation, firm or person making a Submission for the same work and is in all respect fair and without collusion or fraud.
3. No Member of the Council and no officer or employee of the Corporation is or will become interested directly or indirectly as a contracting party, partner, shareholder, surety or otherwise in or in the performance of the Contract or in any portion of the profits thereof, or in any of the monies to be derived there from.
4. The Respondent will hold harmless the Township of South Glengarry and will agree to take responsibility for any health and safety violations as well as the cost to defend such charges as a result of any violation under the Occupational Health & Safety Act.

LOWEST OR ANY SUBMISSION NOT NECESSARILY ACCEPTED

DATED AT _____ THIS _____ DAY OF _____ 2024

Signature of Witness

Signature of Respondent

NOTE:

If the Submission is submitted by or on behalf of a corporation it must be signed in the name of such corporation by a duly authorized officer and the seal of the corporation must be affixed. If the Submission is submitted by or on behalf of an individual or a partnership, a seal must be affixed opposite the signature of the individual or the partner.

SCHEDULE OF ITEMS AND PRICES

Item #1. ONE (1) Portable Generator

Purchase Price: (Including supply, delivery, and Training)

Price \$ _____

HST (this unit) \$ _____

Total Price (this unit) \$ _____

Local Service: _____

Added Value Options: _____

Delivery (weeks): _____

SPECIFICATIONS

PROCUREMENT 2024-17

INTENT OF SPECIFICATIONS

It shall be the intent of these specifications to provide an overview of the scope of the equipment required. With a view to obtaining the best results and the most acceptable equipment, these specifications cover the requirements as to the equipment with which the successful bidder shall conform to. The contractor shall be solely responsible for their product meeting the specification. The size of the unit has been calculated (in KW). Proponents are free to comment to suggest other size models that meet specifications at their own discretion.

Item #1

Supply of ONE (1) Portable Generator

Water/Wastewater Division
18352 County Road 2, Glen Walter, ON

Scope of Work:

Part 1 - General

1.1 SCOPE

- .1 Provide complete CSA factory assembled generator set equipment with digital electronic controls.
- .2 The generator set shall be portable and installed on a single or dual axle trailer (to be one design unit).
- .3 The generator set unit must meet all Ontario Safety Regulations for portable transportation of the unit.
- .4 Provide factory test, startup by a supplier authorized by the manufacturer, and on-site testing of the system. First fill up of diesel tank to be provided.
- .5 The generator set manufacturer shall warrant all equipment provided under this section, whether or not is manufactured by the generator set manufacturer, so that there is one source for warranty and product service. Technicians specifically trained and certified by the manufacturer to support the product and employed by the generator set supplier shall service the generator sets.

1.2 CODES AND STANDARDS

- .1 The generator set and its installation and on-site testing shall conform to the requirements of the following codes and standards:
 - .1 CSA C22.2, No.14-M91 Industrial Control Equipment.
 - .2 CSA C282, 2015 Emergency Electrical Power Supply for Buildings.
 - .3 EN50082-2, Electromagnetic Compatibility - Generic Immunity Requirements, Part 2: Industrial.
 - .4 EN55011, Limits and Methods of Measurement of Radio Interference Characteristics of Industrial, Scientific and Medical Equipment.
 - .5 FCC Part 15, Subpart B.
 - .6 IEC8528 part 4. Control Systems for Generator Sets.
 - .7 IEC Std 801.2, 801.3, and 801.5 for susceptibility, conducted, and radiated electromagnetic emissions.
 - .8 IEEE446 - Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications.
 - .9 IEEE587 for voltage surge resistance.
 - .10 NEMA ICS10-1993 - AC Generator sets.
 - .11 NFPA70 - National Electrical Code. Equipment shall be suitable for use in systems in compliance to Article 700, 701 and 702.
 - .12 NFPA110 - Emergency and Standby Power Systems. The generator set shall meet all requirements for Level 1 systems. Level 1 prototype tests required by this standard shall have been performed on a complete and functional unit, component level type tests will not substitute for this requirement.
 - .13 ULC certified sub-base fuel tank for mobile application.
 - .14 B139-15 Installation Code for Oil Burning Equipment.
 - .15 TSSA Compliance. Provide proof of inspection and TSSA comprehensive form as per B139-15.
 - .16 ULC-S 661 "Overfill Protection Devices for Flammable and Combustible Liquid Storage Tanks."
- .2 The generator set manufacturer shall be certified to ISO 9001 International Quality Standard and shall have third party certification verifying quality assurance in design/development, production, installation, and service, in accordance with ISO 9001.

1.3 ACCEPTABLE MANUFACTURERS

- .1 Only approved bidders shall supply equipment provided under this contract. Equipment proposals must include a line by line compliance statement based on this specification.
- .2 GAL Power Systems Ltd. is an approved bidder for generators and generator accessories.
- .4 Caterpillar Toromont Power Systems Ltd. is an approved bidder for generators and generator accessories.
- .5 Kohler is an approved bidder for generators and generator accessories.
- .6 Cummins is an approved bidder for generator and generator accessories.
- .7 Total Power is an approved bidder for generator and generator accessories.

Part 2 - Products

2.1 GENERATOR SET

- .1 Ratings
 - .1 The generator set shall operate at 1800rpm and at a two selectable voltage of: 347/600V AC, Three phase, Four-wire, 60 hertz and 120/208V-3PH,4W 60hertz.
 - .2 The generator set shall be rated at 40KW, 50kVA at 0.8 PF, prime rating, based on site conditions of: Altitude 500 ft. (152 meters), ambient temperatures up to 104 degrees F (40 degrees C).
 - .3 The generator set rating shall be based on prime rated service.
- .2 Performance
 - .1 Voltage regulation shall be plus or minus 0.5 percent for any constant load between no load and rated load for both parallel and non-parallel applications. Random voltage variation with any steady load from no load to full load shall not exceed plus or minus 0.5 percent.
 - .2 Frequency regulation shall be isochronous from steady state no load to steady state rated load. Random frequency variation with any steady load from no load to full load shall not exceed plus or minus 0.25%.
 - .3 The diesel engine-generator set shall be capable of single step load pick up of 100% nameplate kW and power factor, less applicable derating factors, with the engine-generator set at operating temperature.
 - .4 The alternator shall produce a clean AC voltage waveform, with not more than 5% total harmonic distortion at full linear load, when measured from line to neutral, and with not more than 3% in any single harmonic. Telephone influence factor shall be less than 40.
- .3 Construction
 - .1 The engine-generator set shall be mounted on a heavy-duty steel base to maintain alignment between components. The base shall incorporate a battery tray with hold-down clamps within the rails. For engine leak & blow-by containment, include suitably sized drip tray to mount beneath generator set.
 - .2 All switches, lamps, and meters in the control system shall be oil-tight and dust-tight, and the enclosure door shall be gasketed. There shall be no exposed points in the control (with the door open) that operate in excess of 50 volts.
 - .3 Weather Protective Sound Attenuation Enclosure:
 - .1 A sound-attenuated housing which allows the generator to operate a full rated load in the ambient conditions previously specified. The enclosure shall reduce the sound level of the generator set while operating at full rated load to an average of 72 dBA at 7 meters from the generator set in a free field environment. Housing configuration and materials used may be of any suitable design which meets application needs, except that acoustical materials used shall be oil and water resistant. No foam materials shall be used unless they can be demonstrated to have the same density and life as fiberglass.

- .2 The enclosure shall include hinged doors for access to both sides of the engine and alternator, and the control equipment. Key-locking and padlockable door latches shall be provided for all doors. Door hinges shall be stainless steel.
- .3 The enclosure shall be provided with an exhaust silencer which is mounted inside of the enclosure and allows the generator set package to meet specified sound level requirements. Silencer and exhaust shall include a raincap and rainshield.
- .4 All sheet metal shall be primed for corrosion protection and finish painted with the manufacturers standard colour. All surfaces of all metal parts shall be primed and painted.
- .5 Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant, and designed to minimize marring of the surface when removed for normal installation or service work.
- .6 The unit shall include a subbase fuel tank double wall with a sealed separately vented integral fuel containment basin with a 24 hours at full capacity minimum ULC certified for mobile application. Fill and vent pipes shall be piped suitably to the outside of the enclosure. The subbase tank shall also be equipped with an overfill protection device as per ULC-S661 "Overfill Protection Devices for Flammable and Combustible Liquid Storage Tanks" with audible and visual overfill alarm, fillbox with spill containment with drain and check valve on fill pipe as per TSSA requirements. The full system shall be TSSA compliant. Include TSSA inspection service and provide TSSA compliance form and certificate as per B139-15.
- .7 The enclosure shall be provided with 24VAC motor closed, spring opened air inlet and air outlet louvers and heaters to maintain the enclosure inside temperature at 10°C or more at all times except when the generator is running.
- .8 The enclosure shall be provided with emergency battery pack complete with 2 heads and 2 hrs. battery duration that complies with CSA C22.2 No. 141 inside the enclosure and one outdoor weatherproof light fixture with photocell.
- .9 The enclosure shall be provided with one GFI protected weatherproof duplex receptacle.

.4 Connections

- .1 The generator set load connections shall be composed of silver or tin plated copper bus bars, drilled to accept mechanical or compression terminations of the number and type as shown on the drawings. Sufficient lug space shall be provided for use with cables.
- .2 Power connections to auxiliary devices shall be made at the devices, with required protection located at a wall-mounted common distribution panel.
- .3 Generator set control interfaces to other system components shall be made on a common, permanently labeled terminal block assembly.

2.2 ENGINE AND ENGINE EQUIPMENT

- .1 The engine shall be diesel, 4 cycle, EPA Tier 4 certified, radiator and fan cooled. Minimum displacement shall be 2.2 litres and with 4 cylinders. The horsepower rating of the engine at its minimum tolerance level shall be sufficient to drive the alternator and all connected accessories. Two cycle engines are not acceptable. Engine accessories and features shall include:
 - .1 An electronic governor system shall provide automatic isochronous frequency regulation. The governing system dynamic capabilities shall be controlled as a function of engine coolant temperature to provide fast, stable operation at varying engine operating temperature conditions. The control system shall actively control the fuel rate and excitation as appropriate to the state of the generator set. Fuel rate shall be regulated as a function of starting, accelerating to start disconnect speed, accelerating to rated speed, and operating in various isochronous or parallel states.
 - .2 Skid-mounted radiator and cooling system rated for full load operation in 122°F (50°C) ambient as measured at the generator air inlet, based on 0.5 in H₂O external static head. Radiator shall be sized based on a core temperature which is 20°F higher than the rated operation temperature, or prototype tested to verify cooling performance of the engine/radiator/fan operation in a controlled environment. The cooling system shall be filled with a 50/50-ethylene glycol/water mixture by the equipment manufacturer. Rotating parts shall be guarded against accidental contact.
 - .3 Electric starter(s) capable of three complete cranking cycles without overheating.
 - .4 Positive displacement, mechanical, full pressure, lubrication oil pump.
 - .5 Full flow lubrication oil filters with replaceable spin-on canister elements and dipstick oil level indicator.
 - .6 An engine driven, mechanical, positive displacement fuel pump. Fuel filter with replaceable spin-on canister element. Fuel cooler, suitable for operation of the generator set at full rated load in the ambient temperature specified shall be provided if required for operation due to the design of the engine and the installation.
 - .7 Replaceable dry element air cleaner with restriction indicator.
 - .8 Flexible supply and return fuel lines.
 - .9 Engine mounted charging alternator of 100-ampere minimum, and solid-state voltage regulator.
 - .10 Coolant heater
 - .1 Engine mounted, thermostatically controlled, coolant heater(s). Heater voltage shall be 120VAC, single phase, 60 hz. The coolant heater shall be UL499 listed and labeled.
 - .2 The coolant heater shall be installed on the engine with silicone hose connections. Steel tubing shall be used for connections into the engine coolant system wherever the length of pipe run exceeds 305 mm. The coolant heater installation shall be specifically designed to provide proper venting of the system. The coolant heaters shall be installed using quick disconnect couplers to isolate the heater for replacement of the heater element. The quick disconnect/automatic sealing couplers shall allow the heater element to be replaced without draining the engine cooling system or significant coolant loss.

- .3 The coolant heater shall be provided with a thermostat, installed at the engine thermostat housing. An AC power connection box shall be provided for a single AC power connection to the coolant heater system.
- .4 The coolant heater(s) shall be sized as recommended by the engine manufacturer to warm the engine to a minimum of 100°F (40°C) in a 40°F ambient, in compliance with NFPA110 requirements, or the temperature required for starting and load pickup requirements of this specification.
- .11 Starting and Control Batteries shall be calcium/lead antimony type, 12 volt DC, sized as recommended by the engine manufacturer, complete with battery cables and connectors.
- .12 Provide exhaust silencer of size and type as recommended by the generator set manufacturer and approved by the engine manufacturer. Exhaust system shall be installed according to the engine manufacturer's recommendations and applicable codes and standards.
- .13 A UL listed/CSA certified 15 amp voltage regulated battery charger shall be provided. The charger may be located in the generator enclosure. Input AC voltage and DC output voltage shall be as required. Chargers shall be equipped with float, taper and equalize charge settings. Operational monitors shall provide visual output along with individual form C contacts rated at 4 amps, 120VAC, 30VDC for remote indication of:
 - .1 Loss of AC power - red light
 - .2 Low battery voltage - red light
 - .3 High battery voltage - red light
 - .4 Power ON - green light (no relay contact) Charger shall include an Analog DC voltmeter and ammeter, 12 hour equalize charge timer, and AC and DC fuses.
- .14 A distribution panel in NEMA 3R enclosure, minimum 60A, 120/208V single phase shall be provided within the enclosure. GFI receptacle, emergency light, louvers, heaters and battery charger shall be prewired to the distribution panel. Provide 1-15A-1P additional spare circuit breaker.
- .15 Provide vibration isolators, pad type, quantity as recommended by the generator set manufacturer.
- .16 Provide separate combustion air intake as required, to meet CSA B139 requirements.

2.3 AC GENERATOR

- .1 The AC generator shall be; synchronous, four pole, 2/3 pitch, revolving field, drip-proof construction, single prelubricated sealed bearing, air cooled by a direct drive centrifugal blower fan, and directly connected to the engine with flexible drive disc. All insulation system components shall meet NEMA MG1 temperature limits for Class H insulation system. Actual temperature rise measured by resistance method at full load shall not exceed 105 degrees Centigrade.
- .2 The generator shall be capable of delivering rated output (kVA) at rated frequency and power factor, at any voltage not more than 5 percent above or below rated voltage.

- .3 A permanent magnet generator (PMG) shall be included to provide a reliable source of excitation power for optimum motor starting and short circuit performance. The PMG and controls shall be capable of sustaining and regulating current supplied to a single phase or three phase fault at approximately 300% of rated current for not more than 10 seconds.
- .4 The subtransient reactance of the alternator shall not exceed 12 percent, based on the standby rating of the generator set.
- .5 A generator space heater shall be provided along with thermostat and wired to the distribution panel within the enclosure.

2.4 GENERATOR SET CONTROL

- .1 The generator set shall be provided with a microprocessor-based control system that is designed to provide automatic starting, monitoring, and control functions for the generator set. The control system shall also be designed to allow local monitoring and control of the generator set, and remote monitoring and control as described in this specification. The generator control panel shall be integral with the generator set. The control shall be vibration isolated and prototype tested to verify the durability of all components in the system under vibration conditions encountered. The integral control shall include the specified features and functions.
- .2 Control Switches
 - .1 Mode Select Switch. The mode select switch shall initiate the following control modes. When in the RUN or Manual position the generator set shall start, and accelerate to rated speed and voltage as directed by the operator. In the OFF position the generator set shall immediately stop, bypassing at all time delays. In the AUTO position the generator set shall be ready to accept a signal from a remote device to start and accelerate to rated speed and voltage.
 - .2 Emergency Stop Switch. Switch shall be Red "mushroom-head" push-button. Depressing the emergency stop switch shall cause the generator set to immediately shut down, and be locked out from automatic restarting.
 - .3 Reset Switch. The reset switch shall be used to clear a fault and allow restarting the generator set after it has shut down for any fault condition.
 - .4 Panel Lamp Switch. Depressing the panel lamp switch shall cause the entire panel to be lighted with DC control power. The panel lamps shall automatically be switched off 10 minutes after the switch is depressed, or after the switch is depressed a second time.
- .3 Generator Set AC Output Metering. The generator set shall be provided with a metering set including the following features and functions:
 - .1 Analog voltmeter, ammeter, frequency meter, and kilowatt (KW) meter. Voltmeter and ammeter shall display all three phases. Ammeter and KW meter scales shall be color coded in the following fashion; readings from 0-90% of generator set standby rating: green; readings from 90-100% of standby rating: amber; readings in excess of 100%: red.

- .2 Digital metering set, 0.5% accuracy, to indicate generator RMS voltage and current, frequency, output current, output KW, KW-hours, and power factor. Generator output voltage shall be available in line-to-line and line-to-neutral voltages, and shall display all three phase voltages (line to neutral or line to line) simultaneously.
- .3 Both analog and digital metering are required. The analog and digital metering equipment shall be driven by a single microprocessor, to provide consistent readings and performance.
- .4 Generator Set Alarm and Status Display.
 - .1 The generator set shall be provided with alarm and status indicating lamps to indicate non-automatic generator status, and existing warning and shutdown conditions. The lamps shall be high-intensity LED type. The lamp condition shall be clearly apparent under bright room lighting conditions. The generator set control shall indicate the existence of the following alarm and shutdown conditions on an alphanumeric digital display panel:
 - .1 low oil pressure (alarm)
 - .2 low oil pressure (shutdown)
 - .3 oil pressure sender failure (alarm)
 - .4 low coolant temperature (alarm)
 - .5 high coolant temperature (alarm)
 - .6 high coolant temperature (shutdown)
 - .7 engine temperature sender failure (alarm)
 - .8 low coolant level (alarm or shutdown-selectable)
 - .9 fail to crank (shutdown)
 - .10 fail to start/overcrank (shutdown)
 - .11 overspeed (shutdown)
 - .12 low DC voltage (alarm)
 - .13 high DC voltage (alarm)
 - .14 weak battery (alarm)
 - .15 low fuel-daytank (alarm)
 - .16 high AC voltage (shutdown)
 - .17 low AC voltage (shutdown)
 - .18 under frequency (shutdown)
 - .19 over current (warning)
 - .20 over current (shutdown)
 - .21 short circuit (shutdown)
 - .22 over load (alarm)
 - .23 emergency stop (shutdown)
 - .2 Provisions shall be made for indication of four customer-specified alarm or shutdown conditions. Labeling of the customer-specified alarm or shutdown conditions shall be of the same type and quality as the above specified conditions. The non-automatic indicating lamp shall be red, and shall flash to indicate that the generator set is not able to automatically respond to a command to start from a remote location.

- .5 Engine Status Monitoring
 - .1 The following information shall be available from a digital status panel on the generator set control:
 - .1 engine oil pressure (psi or kPA)
 - .2 engine coolant temperature (degrees F or C)
 - .3 engine oil temperature (degrees F or C)
 - .4 engine speed (rpm)
 - .5 number of hours of operation (hours)
 - .6 number of start attempts
 - .7 battery voltage (DC volts)
 - .2 The control system shall also incorporate a data logging and display provision to allow logging of the last 10 warning or shutdown indications on the generator set, as well as total time of operation at various loads, as a percent of the standby rating of the generator set.
- .6 Engine Control Functions
 - .1 The control system provided shall include a cycle cranking system, which allows for user selected crank time, rest time, and # of cycles. Initial settings shall be for 3 cranking periods of 15 seconds each, with 15-seconds rest period between cranking periods.
 - .2 The control system shall include an idle mode control, which allows the engine to run in idle mode in the RUN position only. In this mode, the alternator excitation system shall be disabled.
 - .3 The control system shall include an engine governor control, which functions to provide steady state frequency regulation as noted elsewhere in this specification. The governor control shall include adjustments for gain, damping, and a ramping function to control engine speed and limit exhaust smoke while the unit is starting. The governor control shall be suitable for use in paralleling applications without component changes.
 - .4 The control system shall include time delay start (adjustable 0-300 seconds) and time delay stop (adjustable 0-600 seconds) functions.
 - .5 The control system shall include sender failure monitoring logic for speed sensing, oil pressure, and engine temperature which is capable of discriminating between failed sender or wiring components, and an actual failure conditions.
- .7 Alternator Control Functions
 - .1 The generator set shall include an automatic digital voltage regulation system that is matched and prototype tested by the engine manufacturer with the governing system provided. It shall be immune from misoperation due to load-induced voltage waveform distortion and provide a pulse width modulated form misoperation due to load-induced voltage waveform distortion and provide a pulse width modulated output to the alternator exciter. The voltage regulation system shall be equipped with three-phase RMS sensing and shall control buildup of AC generator voltage to provide a linear rise and limit overshoot. The system shall include a torque-matching characteristic, which shall reduce output voltage in proportion to frequency below a threshold of 58HZ. The voltage regulator shall include adjustments for gain, damping, and frequency roll-off. Adjustments shall be broad range, and made via digital raise-lower switches, with an alphanumeric LED readout to indicate setting level. Rotary potentiometers for system adjustments are not acceptable.

- .2 Controls shall be provided to monitor the output current of the generator set and initiate an alarm (over current warning) when load current exceeds 100% of the rated current of the generator set on any phase for more than 60 seconds. The controls shall shut down and lock out the generator set when output current level approaches the thermal damage point of the alternator (over current shutdown). The protective functions provided shall be in compliance to the requirements of NFPA70 article 445.
- .3 Controls shall be provided to individually monitor all three phases of the output current for short circuit conditions. The control/protection system shall monitor the current level and voltage. The controls shall shut down and lock out the generator set when output current level approaches the thermal damage point of the alternator (short circuit shutdown). The protective functions provided shall be in compliance to the requirements of NFPA70 article 445.
- .4 Controls shall be provided to monitor the KW load on the generator set, and initiate an alarm condition (over load) when total load on the generator set exceeds the generator set rating for in excess of 5 seconds. Controls shall include a load shed control, to operate a set of dry contacts (for use in shedding customer load devices) when the generator set is overloaded.
- .5 An AC over/under voltage monitoring system that responds only to true RMS voltage conditions shall be provided. The system shall initiate shutdown of the generator set when alternator output voltage exceeds 110% of the operator-set voltage level for more than 10 seconds, or with no intentional delay when voltage exceeds 130%. Under voltage shutdown shall occur when the output voltage of the alternator is less than 85% for more than 10 seconds.
- .8 The generator set shall be provided with one (1) mounted circuit breaker, 60A-3P (600V-3PH). The circuit breaker shall incorporate an electronic trip unit that operates to protect the alternator under all overcurrent conditions, or a thermal-magnetic trip with other overcurrent protection devices that positively protect the alternator under overcurrent conditions. The supplier shall submit time overcurrent characteristic curves and thermal damage curve for the alternator, demonstrating the effectiveness of the protection provided.
- .9 Control Interfaces for Remote Monitoring
 - .1 All control and interconnection points from the generator set to remote components shall be brought to a separate connection box. No field connections shall be made in the control enclosure or in the AC power output enclosure. Provide the following features in the control system:
 - .2 Form "C" dry common alarm contact set rated 2A @ 30VDC to indicate existence of any alarm or shutdown condition on the generator set.
 - .3 One set of contacts rated 2A @ 30VDC to indicate generator set is ready to load. The contacts shall operate when voltage and frequency are greater than 90% of rated condition.
 - .4 Form "C" dry alarm contact set rated at 120VAC for:
 - .1 Generator Not In Auto
 - .2 Generator Running
 - .3 Low Battery Voltage
 - .4 Low Fuel Level

2.5 GENERATOR SET POWER CONNECTIONS

- .1 The generator set shall be provided with one 60A-3P, 600V-3Ph weatherproof receptacle with cover, one 120/208V-3Ph, 4W enclosed weatherproof 100A-3P circuit breaker and one 100A-3Ph, 4W weatherproof receptacle with cover all mounted on the unit. If unit required a step down transformer, it should be mounted on the trailer and enclosed in a NEMA3R tamper resistant enclosure with encapsulated cast resin windings.
- .2 Provide common grounding terminal on the unit for external grounding connection to ground rod.

Part 3 - Execution

3.1 SEQUENCE OF OPERATION

- .1 Generator set shall start on receipt of a start signal from the pumping station control or started manually. The start signal shall be via hardwired connection to the generator set control.
- .2 The generator set shall complete a time delay start period as programmed into the control.
- .3 The generator set control shall initiate the starting sequence for the generator set. The starting sequence shall include the following functions:
 - .1 The control system shall verify that the engine is rotating when the starter is signalled to operate. If the engine does not rotate after two attempts, the control system shall shut down and lock out the generator set, and indicate "fail to crank" shutdown.
 - .2 The engine shall fire and accelerate as quickly as practical to start disconnect speed. If the engine does not start, it shall complete a cycle cranking process as described elsewhere in this specification. If the engine has not started by the completion of the cycle cranking sequence, it shall be shut down and locked out, and the control system shall indicate "fail to start".
 - .3 The engine shall accelerate to rated speed and the alternator to rated voltage. Excitation shall be disabled until the engine has exceeded programmed idle speed, and regulated to prevent over voltage conditions and oscillation as the engine accelerates and the alternator builds to rated voltage.
- .4 On reaching rated speed and voltage, the generator set shall operate as dictated by the control system in isochronous, synchronize, load share, load demand, or load govern state.
- .5 When the start signal has been removed from the generator set, it shall complete a time delay stop sequence. The duration of the time delay stop period shall be adjustable by the operator.
- .6 On completion of the time delay stop period, the generator set control shall switch off the excitation system and shall shut down.
 - .1 Any start signal received after the time stop sequence has begun shall immediately terminate the stopping sequence and return the generator set to isochronous operation.

Part 4 - Other Requirements

4.1 SUBMITTALS

- .1 Within 5 working days after award of contract, provide a set of the following information for review in electronic format (PDF).
 - .1 Manufacturer's product literature and performance data, sufficient to verify compliance to specification requirements.
 - .2 A paragraph by paragraph specification compliance statement, describing the differences between the specified and the proposed equipment.
 - .3 Manufacturer's certification of prototype testing.
 - .4 Manufacturer's published warranty documents.
 - .5 Shop drawings showing plan and elevation views with certified overall dimensions, as well as wiring interconnection details.
 - .6 Interconnection wiring diagrams showing all external connections required; with field wiring terminals marked in a consistent point-to-point manner.
 - .7 Manufacturer's installation instructions.

4.2 FACTORY TESTING

- .1 The generator set manufacturer shall perform a complete operational test on the generator set prior to shipping from the factory. A certified test report shall be provided. Equipment supplied shall be fully tested at the factory for function and performance.
- .2 Factory testing may be witnessed by the owner and consulting engineer. Costs for travel expenses will be the responsibility of the owner and consulting engineer. Supplier is responsible to provide two weeks notice for testing.
- .3 Generator set factory tests on the equipment shall be performed at rated load and rated power factor. Generator sets that have not been factory tested at rated power factor will not be acceptable. Tests shall include: run at full load for 4 hours, maximum power, voltage regulation, transient and steady-state governing, single step load pickup, and function of safety shutdowns.

4.3 INSTALLATION

- .1 Equipment shall be initially started and operated by representatives of the manufacturer.
- .2 All equipment shall be physically inspected for damage. Scratches and other installation damage shall be thoroughly cleaned to remove all dirt and construction debris prior to initial operation and final testing of the system.

4.4 ON-SITE ACCEPTANCE TEST

- .1 The complete installation shall be tested for compliance with the specification following completion of all site work. Testing shall be conducted by representatives of the manufacturer, with required fuel supplied by Contractor. The Consultant shall be notified in advance and shall have the option to witness the tests.

- .2 Installation acceptance tests to be conducted on-site shall include a "cold start" test, a four hour full load test, and a one step rated load pickup test in accordance with NFPA 110. Provide a resistive load bank and make temporary connections for full load test.
- .3 Perform a power failure test on the entire installed system. This test shall be conducted by opening the power supply from the utility service, and observing proper operation of the system for at least 2 hours. Coordinate timing and obtain approval for start of test with site personnel.

4.5 TRAINING

- .1 The equipment supplier shall provide training for the facility operating personnel covering operation and maintenance of the equipment provided. The training program shall be not less than 4 hours in duration and the class size shall be limited to 5 persons. Training date shall be coordinated with the facility owner.

4.6 SERVICE AND SUPPORT

- .1 The manufacturer of the generator set shall maintain service parts inventory at a central location which is accessible to the service location 24 hours per day, 365 days per year.
- .2 The generator set shall be serviced by a local service organization that is trained and factory certified in generator set service. The supplier shall maintain an inventory of critical replacement parts at the local service organization, and in service vehicles. The service organization shall be on call 24 hours per day, 365 days per year.
- .3 The manufacturer shall maintain model and serial number records of each generator set provided for at least 20 years.

4.7 WARRANTY

- .1 The generator set and associated equipment shall be warranted for a period of not less than 5 years from the date of commissioning against defects in materials and workmanship.
- .2 The warranty shall be comprehensive. No deductibles shall be allowed for travel time, service hours, repair parts cost, etc.

END OF SECTION

INSTRUCTIONS TO BIDDERS

PROCUREMENT 2024-17

Time Limit for Bidding

Submissions will be received electronically at the time and date designated which shall be deemed to be the Date of Closing.

Late submissions will not be accepted.

An official virtual public opening of submissions will take place **15** minutes following the closing.

References

All submissions are to include 3 references detailing projects with similar specifications.

Form of Submission

All Submissions must be upon the Submission Form for the Contract. All information required must be provided.

Right to Accept or Reject Submissions

The Corporation of the Township of South Glengarry reserves the right to reject any or all Submissions or to accept any Submission should it be deemed in the interest of the Corporation of the Township of South Glengarry to do so.

1. Submissions

- 1.1. All submissions must be upon the Form of Submission, if included herein, and must be accompanied by a duly completed copy of the Schedule of Items and Prices.
- 1.2. All information required must be provided and the submission price must equal the total amount of the Schedule of Items and Prices.
- 1.3. Each Respondent is solely responsible for any and all costs associated with preparing and submitting its submission.
- 1.4. All submissions become the property of the Township of South Glengarry. Details of submissions may be disclosed after the evaluation process and therefore shall not be treated as confidential unless stated otherwise.

- 1.5. Upon closing, all submissions become irrevocable for 60 days from the closing time; a Respondent that fails to comply with this shall forfeit any deposit and will be liable for damages.
- 1.6. The Township of South Glengarry reserves the right to award the locations individually or in a group.
- 1.7. Proponents are permitted to bid on all items or singular locations.

2. Declarations of Interests

- 2.1. The Respondent shall clearly indicate any and all persons, firms or corporations, other than the Respondent, that has any direct or indirect interest in the Respondent being successful in this solicitation and describe the general nature of the interest.
- 2.2. The Respondent shall clearly indicate any Member of Council or employee of the Township that has any direct or indirect pecuniary interest in the Respondent being successful in this solicitation and describe the general nature of the interest.

3. Drawings and Contract Documents

- 3.1. Each Respondent must satisfy him/herself by their own study with the submittal of all documents relating to the portable generator being submitted for the proposal. This shall include but not limited to the calculations, drawings, and procurement documents. Agreement, as to the practicability of completing the delivery and training successfully within the stipulated time.

4. Tariffs

4.1 Any added costs associated with foreign tariffs imposed on any materials or equipment used in the manufacture of the specified vehicle, shall be removed if the said tariff is removed at any time prior to the final delivery and payment of the vehicle. These funds will be removed from the total agreed upon purchase price.

5. Taxes

- 5.1. The purchase price submitted shall be exclusive of applicable taxes.

6. Ability and Experience of Respondent

- 6.1. It is not the intent of the Corporation of the Township of South Glengarry to award this Contract to any Respondent who does not furnish satisfactory evidence that they have the ability and experience in this class of work and that they have sufficient capital and plant to enable him/her to prosecute and complete the Agreement.

7. Collusion or Fraud

- 7.1. The Respondent has ensured their submission is made without connection, comparison of figures, or arrangements with, or knowledge of any other corporation, firm or person making a submission for the same work and is in all respect fair and without collusion or fraud.

8. Evaluation

- 8.1. The Township of South Glengarry shall utilize the following scoring system in the evaluation of submissions:

Criteria	Maximum Points
Local Service/Support	10
Added Value Options	10
Delivery timeline	10
Meeting Specification	20
Price	50
Total	100

Local Service/Support

Proponents should identify how they would provide the local service & support and the closest service provider for warranty, repair and troubleshooting, in proximity to the Township office at 6 Oak St Lancaster.

Added Value Options

Proponents should identify any options on their specified unit that are over above the listed specification that would benefit the intended use of the unit.

Delivery timeline

Proponents should identify delivery time +/- a calendar week.

Meeting Specification

Does quoted unit meet minimum specification or better.

9. Written Agreement

- 9.1. This solicitation is subject to a formal Agreement being prepared and executed.

- 9.2. The Township shall not be obligated to any Respondent whatsoever unless a written Agreement has been executed relating to an approved submission.
- 9.3. The successful Respondent will be required to execute the Agreement within ten (10) business days from the date of notice to the Respondent, according to the address given in the submission, that the Contract is ready for signature.
- 9.4. Unless specifically stated otherwise in any Agreement arising from this procurement process, any service, good or claim made in a Respondent's submission shall be considered to be part of the Agreement arising from this procurement process.

10. Payment

- 10.1. Payment shall be considered as compensation in full for the supply of all necessary labour, equipment, trucking and appliances including all material to complete the work as outlined in this Contract.
- 10.2. Payment shall be construed as including protection to all existing plant and structures within the limits of this Contract.
- 10.3. The Contractor shall note that any damage to existing plant or structures caused by his operations shall be reinstated to the Township of South Glengarry standards at his own expense subject to the approval of the Township Director of Water, or their designate, and will, in no way, be considered as an extra to the Contract.
- 10.4. The Contractor is to provide a Statutory Declaration of payment for all sub-contractors used.

11. Legislation, Safety and Insurance

- 11.1. The successful Respondent shall perform the Work in accordance with all applicable laws and regulations, including but not limited to the *Occupational Health and Safety Act* and regulations of the Province of Ontario. In particular the Municipality will require, where appropriate, Respondents to furnish proof of training for WHMIS and a copy of their Health and Safety policy, as well as WSIB certificate with CAD 7 experience; these documents do not need to accompany the submission.
- 11.2. Should the successful Respondent be in contravention of the above, all work on the project shall cease immediately and remain stopped until adequate corrective measures have been taken and the Township shall be notified immediately. The Contractor will immediately take whatever corrective measures are necessary, and the decision of the Township Director of Water, or their designate, shall be final in this regard.

- 11.3. The successful Respondent shall be the prime contractor and shall control the work to ensure compliance with all occupational health and safety laws and regulations.
- 11.4. The successful Respondent agrees to hold harmless the Township of South Glengarry and will agree to take responsibility for any health and safety violations as well as the cost to defend such charges as a result of any violation under the *Occupational Health and Safety Act*.
- 11.5. The successful Respondent shall save harmless the Corporation of Township of South Glengarry from any liability and the successful Respondent shall have and maintain commercial general liability insurance coverage that shall include but not be limited to bodily and personal injury liability, property damage, contractual liability, professional liability and contingent employers liability coverage with an inclusive limit of not less than \$5,000,000 per occurrence for personal injury or property damage, with an annual aggregate of at least \$2,000,000 and a deductible not to exceed \$10,000; the Corporation of the Township of South Glengarry shall be identified as an additional insured on the successful Respondent's insurance policy. The successful Respondent shall also carry standard form automobile liability insurance with an inclusive limit of not less than \$2,000,000 for any one occurrence in respect of the use or operation of vehicles by the Respondent for the provision of services, whether those vehicles are owned, leased or not owned by the Respondent.
- 11.6. The successful Respondent is to be known as the operator with regard to Commercial Vehicle Operator Registration (C.V.O.R.) Legislation as defined in the *Highway Traffic Act*.

12. Rights of Respondents/Contractor

- 12.1. By submission of a clear and detailed written notice, a Respondent may amend or withdraw its submission prior to the closing date and time.
- 12.2. The Contractor shall be entitled to simple interest calculated at ½ per cent per month on late payments.
- 12.3. The Contractor is entitled to final payment upon substantial completion, subject to any holdbacks and maintenance securities.
- 12.4. After the acceptance of a submission, the Contractor may apply to the Township to substitute another Material identified by a different trade or other name for the Material designated as aforesaid or propose a different work process. The application shall be in writing and shall state the price for the proposed substitute Material or work process and such other information as the Township may require.

- 12.5. Submissions and correspondence of Respondents or the Contractor shall be protected by the Freedom of Information and Protection of Privacy Act.

13. Rights of the Township

- 13.1. Notwithstanding anything herein, if it is deemed most favourable in the interests of the Township of South Glengarry then the Township reserves the following rights, to be exercised at its sole discretion, in order to select a submission that provides the greatest value based on quality, service and price:
- 13.1.1. to accept corrections to a submission after the closing date for obvious clerical errors except those that would vary the bid price.
 - 13.1.2. to reject any or all submissions.
 - 13.1.3. to include externalities and full-life cycle costs in determining price.
 - 13.1.4. to use its own estimates on time requirements or “cost plus” estimates in determining price.
 - 13.1.5. to award by item, or part thereof, groups of items, or all items of the procurement.
 - 13.1.6. to accept non-compliant submissions where such non-compliance relates purely to a matter of form, is of a trivial nature, or has no effect upon the relative standing of the submissions.
 - 13.1.6.1. Notwithstanding anything herein, the Township reserves the following rights in all cases, to be exercised at its sole discretion:
 - 13.1.7. to reject any or all submissions based on one or more of the following factors: safety, financial stability of the Respondent, previous problems with the Respondent in delivering goods or services, the benefits of diversifying the Township’s sources of supply, reliability of a Respondent, and other commercially relevant considerations;
 - 13.1.8. to reject any submission that has an all-inclusive cost that is more than 40% below or more than 40% above the average prices submitted and evaluated.
 - 13.1.9. to reject any or all submissions if the fairness or legitimacy of the procurement process could reasonably be called into question because of interests any and all persons, firms or corporations have in a Respondent’s submission.
 - 13.1.10. to modify, extend, suspend, postpone or cancel any part of this solicitation or any subsequent processes without any liability to anyone.

- 13.1.11. to issue, prior to the closing date, addenda for any part of the procurement process, including guidelines, plans, specifications, scope of work, requirements, timelines, etc.;
 - 13.1.12. to cancel any Agreement arising out of this procurement process, without liability to the Township, if it is found that the successful Respondent provided information as part of this procurement process that it should have known to be incorrect and, in such circumstances, the Respondent will be liable for any damages incurred by the Township resulting from the cancellation of any such Agreement;
 - 13.1.13. in the event of an emergency or pending emergency, to cancel the solicitation and accept, at any time, the submission that best meets the needs of the Township given the emergency.
 - 13.1.14. the Township may contact any Respondent before, during and/or after this procurement process, including to clarify or gather additional information regarding a submission.
- 13.2. In the event that two or more submissions are ranked as equal the Township reserves the right to break the tie in a manner it deems appropriate.
 - 13.3. Where a stepped or ranked scoring process is used, the Township reserves the right to score one or more submissions for any criteria as tied or to use a ranking for any criteria that exceeds the total number of submissions.
 - 13.4. The Township reserves the right, at its sole discretion, to restrict a Respondent from participating in future solicitations if, at any time, they fail to follow any part of this procurement process.
 - 13.5. The Township reserves the right to determine the existence of an emergency situation, and when such an emergency situation is deemed to exist the Township may instruct the Contractor to take action to remedy the situation. If the Contractor does not take timely action, or if the Contractor is not available, the Township may direct others to remedy the situation.

14. Other

- 14.1. A Respondent must be prepared, if requested, to present evidence of experience, ability, service facilities and financial standing necessary to meet satisfactorily the requirements set forth or implied in the procurement process, regardless of whether this is a requirement of the procurement process.
- 14.2. If this solicitation is a “request for information”, “request for expression of interest”, “request for qualifications” or similar request then this process does not give rise to any contractual rights or obligations.

- 14.3. The Contractor agrees to indemnify the Township for costs or third-party claims incurred due to the Contractor's improper use of intellectual property.
- 14.4. Where the Contractor fails to correct a default within the time specified by the Township or where the Contractor fails to comply with the terms of the Procurement or Contract Documents, the Township, without prejudice to any other right or remedy the Township may have, may terminate the Contractor's right to continue the Work in whole or in part by giving written notice to the Contractor and charge the Contractor the additional cost over the submission price of completing the Work or portion thereof.
- 14.5. The term "should" when used in this document does not have the same meaning as "shall". Instead, the term "should" means "ought to"; that is, the condition that the "should" applies to is not an absolute requirement but a submission could be ruled as non-compliant, at the Township's sole discretion, if the condition is not met.