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Regarding: City of Grand Prairie - Prairie Paws Animal Shelter Expansion
600 kW Diesel Generator & ATS Turnkey Install NJPA Member

Quote No: 30357219 v3

Date: 10/20/17

Quote Expires: 30 Days

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Caterpillar Model-C18 PGAM Generator Set

Power Setting	600 kW
Voltage	480/277 VAC, 3Ø, 60 Hz.
Application Rating	Standby
Engine	Caterpillar – 18.13L Diesel Diesel Engine – EPA Tier 2 Certified Certification – UL2200
Engine Governor	Isochronous, Electronic
Cooling System	GenSet Mounted 120°F/49°C Ambient Engine Lube Oil & Antifreeze 50/50 Mix Engine Coolant Heater Low Coolant Temperature and Level Alarm Switches Coolant drain line with valve Fan and belt guards Caterpillar Extended Life Coolant Coolant level sight gauge Jacket water pump, gear driven, centrifugal Thermostats and housing
Air Inlet System	Air Cleaner Aftercooler Turbocharger
Lube System	Oil cooler Lubricating oil Oil filler and dipstick Oil filter Oil drain line with valve piped to edge of base Fumes disposal piped to front of radiator
Starting System	24 volt DC Electric Cranking Motor Batteries, Battery Rack, & Cables Battery Charger - 10amp
Charging System	Engine Driven Battery Charging Alternator
Exhaust System	Carbon Steel Critical Grade Internally mounted

**Generator/Alternator
& Attachments**

Stainless Steel Engine Exhaust Flex Connector
Exhaust manifold, dry
Exhaust Rain Cap
4 Pole, Single Bearing
Excitation – 300% FLC PMG
2/3 pitch, random wound
IP23 Protection
Class H insulation
Cable connections located inside generator
housing(NEMA compatible)

Voltage Regulation

Power center, IP22 rear facing
Automatic Voltage Regulation - 3Ø Sensing
Anti-Condensation/Space Heater
Integrated Voltage Regulation System (IVR)
Electronically controlled by the EMCP 4 through
the use of an excitation module.

Main Line Breaker

Circuit Breaker
GenSet Mtd.-
1200 Amp
100% Rated w/ Shunt Trip & Auxiliary Contact
LSI Electronic Trip Unit
3 Pole

Control Panel

Cable Lugs, Cable Access Box – Bottom Entry
Electronic Modular Control Panel – 4.2
Genset Mounted & Vibration Isolated
Emergency stop pushbutton
Voltage adjust potentiometer
Speed adjustment
Panel illuminating lights
Controls for:
Auto/start/stop
Speed and voltage adjust
Engine cooldown timer
Engine cycle crank
Alarm acknowledge
Lamp test
Digital monitoring for:
RPM
DC volts
Operating hours
Oil pressure
Coolant temperature
Digital AC metering – 3 phase, true
RMS, +/- 2 % accuracy
Voltage (L-L, L-N)
Current (Phase)

Average Volt, Amp, Frequency
kW, kVAr, kVA (Average, Phase, %)
Power Factor (Average, Phase)
kW-hr, kVAr-hr (total)
Generator frequency
Hertz

Safety Shutdown protection with common indicating light for:

Low oil pressure
High coolant temperature
Overspeed
Emergency stop
Failure to start (overcrank)
Low coolant level

Generator Protection

Generator phase sequence
Over/Under voltage
Over/Under frequency
Reverse Power (kW)
Reverse Reactive Power (kVAr)
Overcurrent

Engine Monitoring

Coolant temperature
Oil pressure
Engine speed (RPM)
Battery voltage
Run hours
Crank attempt and successful
start counter

Engine Protection

Control switch not in auto (alarm)
High coolant temp (alarm
and shutdown)
Low coolant temp (alarm)
Low coolant level (alarm)
High engine oil temp (alarm
and shutdown)
Low, high, and weak battery voltage
Overspeed
Overcrank

Inputs & Outputs

Two dedicated digital inputs
Six programmable digital inputs
Six programmable form A dry contacts
Two programmable form C dry contacts
Two digital outputs

	Communications
	Primary and accessory CAN data links
	RS-485 annunciator data link
	Modbus RTU (RS-485 Half duplex)
	Digital AC Meters - Volt, Amp, Hz –
	w/ 3Ø Selector Switch
	Digital Engine Gauges & Alarms
	Remote Annunciator - Caterpillar 16 point
	NFPA 110 – Qty 1
Caterpillar Enclosure	Sound Attenuated Package
	Sound Rating of 75 dBA at 23’
	in free-field environment
	Wind Rating of 120MPH
	Key Locking Doors
	Epoxy Enamel Paint Finish – CAT White
Mounting System	Linear Vibration Isolators (Elastomeric)
	Engine / Generator Skid-Base Rails
Fuel System	Primary fuel filter w/ integral water separator
	& secondary filter
	Fuel priming pump
	Flexible fuel lines
	Fuel pressure gauge
	Engine fuel transfer pump
Fuel Tank	Diesel Base Tank
	UL 142 Listed
	Double Wall
	1041 Gallon Capacity/1024 Gallon Usable
	carbon steel - heavy gauge material
	Lockable Fuel Fill
	12’ Above Grade Normal Vent
	shipped loose to be installed at site
	12’ Above Grade Emergency Vent
	shipped loose to be installed at site
	5 Gallon Spill Bucket
	Overfill Prevention Valve (Mechanical)
	Fuel sender (FL4STG1)
	Low, Critical Low, High & Critical High
	Level Gauge, Fuel Lines, Venting & Alarm Contacts
Accessory Items	Factory Testing - Standard Caterpillar Test at .8 PF
	for Full Rated Load
	Factory Warranty - 2 Yr./1000 hours*
	*NOTE: When purchased through NJPA Program
	Factory Warranty is extended to
	4 Yr./2000 hours at no additional cost.
Current Lead Time	14 weeks out of the factory plus
	2-4 weeks for modifications

AUTOMATIC TRANSFER SWITCH -

Zenith Series - ZBTS Bypass/Isolation Transfer Switch

Model: ZBTS00B00080F

Operation: ZBTS - Bypass/isolation Open Transition

Application: 00 - Utility to Generator-Auto Transfer-Vertical Design

Amperage: 800 Amp

Poles: 4 Pole

SER Source 1 Breaker Protection Included

World Pole: North America

Country: ZEXP-US (United States)

Voltage Phase Wires: 3 Phase/4 Wire

Voltage Frequency: 60HZ

System Voltage: ZVC70 (277/480 volt, 3 phase, 4 wire, 60 hz)

Enclosure: ZEC3R0BD (Nema 3R)

Option Package: MCON00S (Controls Package - 3 Phase)

Current Lead Time: 8 weeks

Accessories & On-Site Services:

Service & Make Ready

Standard Caterpillar Testing

Delivery to Job Site

On-Site Start Up testing using resistive load banks - 2 hours

Performed during normal business hours

On-Site Training available during start up testing

if requested at time other than start up additional costs will be incurred

O & M Manual – Qty 1

Submittals provided in electronic format

Note: All start up and commissioning services to occur one/same day.

Generator and ATS - Install Scope of Work:

1. All wiring to meet the requirements of the 2011 National Electrical Code.
2. No back charges for cleanup will be accepted unless prior written notice and forty eight hours has been given to comply.
3. Any And All misc. materials to make a complete and operable assembly.
4. Concrete and Concrete work for a 11' x 23' Pad with 8" x 12" perimeter beam and a 6'x6' pad for the ATS.
5. Crane to set the 600 KW Genset.
6. Conduit and Wire for the 800 Amp ,480 volt circuit from Generator to the ATS.
7. Install of ATS with Bypass.
8. Conduit and Wire for the 60 amp, 120 volt circuit for the Charger and Block heater.....(1)
9. Conduit and wire from Genset to ATS for the start wiring.
10. Install of Remote Annunciator and wiring.
11. Install of Communication cable from building to Generator.
Termination by others. Conduits provided by others from Generator to Building.

Exclusions:

1. Utility Company Charges.
2. Cutting, patching, coring and roof penetrations.
3. HVAC and Mechanical, controls, control wiring and starters.
4. Bonding.
5. Temporary power.
7. Omissions from Electrical Drawings or Specifications.
8. Fuel for Startup & Testing.
9. Any and All Engineering Fees and Bills for Drawings/Plans/Documents designed and sealed by an engineer.
10. Conduit, Wire and Terminations for the Line /Loads from Utility and Load side power to building.
11. Any and All Excavation/ Backfill of site, for the Utility, and Load side conduits and conductors.
12. Coordination study, infrared or NETA testing of ATS or Generator/s.
13. Landscaping or irrigation.
14. Local codes are not included unless stated.
15. State/Local/Emissions Taxes.

Qualifications:

1. All Products included in this Proposal are valued (based on current Commodity Pricing) at the time of the Bid. An Increase in the price of Raw Materials between the estimate time and time of official award of the project will require a Change in the final price to complete the project.
2. Price firm for 30 days and based on a mutually acceptable contract.
3. Pricing is based on all work being completed Monday through Friday 8:00 AM through 4 PM.

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BMS - Install Scope of Work:

Expansion of the existing Reliable Controls energy management control system - a turnkey system installation inclusive of all hardware, electrical installation, programming, user interface graphics, scheduling, trending, alarms, and training. This system installation will enhance the building's operation and long-term sustainability. We propose to furnish necessary equipment, labor and materials for this portion of the project. The quotation includes the following:

Generator Items included:

Tie-in to existing Reliable Controls front-end
Setup of trendlogs for all inputs and setup of runtime logs
Onsite Training
This proposal includes a 1 year warranty.
DDC system to control:
Caterpillar Generator
 Dedicated Reliable DDC Controller
 All required control cable and installation
 Static IP router, remote alarming via text/email, complete graphics

package per owner's requirements.
MODBUS communications interface to generator and ATS.
If ATS does not have MODBUS, the dry contact alarms
will be monitored instead.
Control enclosure with UPS (uninterruptable power supply) to
keep system online during power transfer.

BMS - Clarifications and exclusions:

All conduits, pathways, coring, trenching, and any other work required to
get cable from the generator and ATS to inside the building is
excluded from this proposal.
The MODBUS cards are assumed to already exist in good working order.
This proposal excludes MODBUS cards for the ATS and generator.
Owner to provide list of the MODBUS points that are needed for
monitoring for configuration of the MODBUS profile.
Owner to provide a dedicated static IP address for remote communication.
Sales tax, bonds and permits not included.

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Professional Engineering Services- Scope of Work:

The services consist of providing the power design for inclusion of an emergency
generator to support the expansion project currently under construction.

The proposal makes the following assumptions:

- This proposal assumes that services during construction will be limited to
review of shop drawing submittals.
- The following items are not included in our basic services:
Record drawings.
Commissioning of the emergency power system.

The engineering firm proposes to provide the electrical engineering design for the
referenced project in sufficient detail to receive construction bids from
subcontractors and in sufficient detail to install the systems in accordance with
applicable codes. Deliverables will include original drawings (CADD Plots) and
specifications prepared for binding separately. Deliverables will not include any
cost estimates. Drawings will be sealed by a Registered/Licensed Professional
Engineer.

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RETAIL PRICE.....	\$326,827.62
NJPA Member PRICE.....	\$253,965.92

Reference NJPA Contract # 080613-CAT

**Note: Any code interpretations made by the inspector with jurisdiction that
lead to changes in material or scope of work are billable and will be
handled as a change order should they arise.**

Terms are 30days net with approved credit.

Price is valid for 30 days

Price does not include applicable taxes

To order or start submittals please sign, date and send back to my attention:

Name _____ Date _____

Thank you,

John Fabrega
Power Systems Sales
2001 N. Loop 12
Irving, TX 75061
Mobile: 972.978.5407
john.fabrega@holtcat.com



HOLT POWER SYSTEMS TERMS & CONDITIONS

- Mufflers** Mufflers are to be lifted and put in place on top of the enclosure at the time of off loading by the installing contractor.
- Proposal** This proposal is provided to meet the spirit and intention of the project equipment requirements. Some interpretational differences between our proposal and the specifications may exist, therefore the above bill of material contains our offer for this project, none other is expressed or implied unless stated in writing.
- Pricing** Recently the cost of some of our vendor products has experienced severe price swings in the upward direction. Therefore it has become increasingly difficult to hold our prices for a prolonged period of time. If our quote is older than 20 days please call to verify our price.
- Taxes** The above price(s) does(do) not include state and local taxes unless otherwise specifically stated. **A 1.5% additional ser charge is required by the state of Texas for all stationary engine equipment due to emission restrictions. This is in addition to any state and local taxes that may be required.**
- Lead Time** Standard delivery of proposed Caterpillar Generator Set to jobsite will be confirmed after receipt of order and submittals are approved and credit terms are agreed.
- Automatic transfer switch(es) is(are) quoted to jobsite in approximately 6-8 weeks after receipt of order and approved submittals and approved credit terms are agreed.
- The above quoted lead-times are standard lead-times from the factory at the time of this quotation. In some cases lead-times maybe able to be improved to assist in customer needs. Please call and inquire about possible improved lead-times.**

Please note: The Caterpillar factory has mandatory factory shutdowns for two weeks in December/January and one week in July. The length of those shutdowns will extend lead-

times on orders entered at those times. Orders, which include non-standard features, may require additional time before shipment. Consult with your Caterpillar dealer at the time of order.

Holt Power Systems has made a significant commitment to ensuring we are able to quickly respond to opportunities by maintaining a substantial inventory that may reduce the lead-time above.

Special Notes	Please verify the voltage, number of poles in ATS, terminal conductor sizes and other Bill of Material items quoted above as compared to the requirements of this project. Lugs for terminations above 1200A are not included.
Fuel Tank	Increasingly we are seeing dramatic changes occur at the municipal level in regard to fire code requirements. They are too numerous and variable to keep track of for each of the area municipalities. Unless otherwise stated within the body of this quotation, the fuel tank included is as specified by the written specifications of this project (if specifications were supplied at the time of quotation). The specifications may be in conflict with City Fire Codes for the location of the project. We will make every attempt to notify you of specification variances with local codes when known, however responsibility for compliance lies with the specifying engineer and those that pull the permit for the project.
Payment	Terms are NET 30 DAYS at the time of shipment to jobsite based on Holt credit department approval, otherwise terms are C.O.D.
Term's	<p>Payment due in full Net 30 after delivery with approved Holt credit or COD at time of shipment.</p> <p>Sales tax will be added to invoice. Resale tax certificate must be on file with the Holt credit department for tax-exempt sales.</p>
Warranty	Caterpillar standard two (2) year warranty applies for standby applications. Standard manufacturer's warranty applies to all non-Caterpillar equipment. Copies of warranty statements are available upon.
Cancellation	There will be a minimum 25% cancellation fee for orders cancelled, once placed and accepted by Holt Power Systems. Cost of custom components, completed fabrication, or any other work performed at the time of cancellation will be added to the cancellation fee. If all material have been acquired the cancellation fees will be 100%. Caterpillar content, 14 days after orders placed will be 100% of the order.
Other	<p>Holt Power Systems is an equipment supplier only. No fuel, wiring, connecting, hook-up, plumbing, or other installation type labor is included in the proposal unless noted herein.</p> <p>The customer is responsible for any and all installation of the above equipment. Holt personnel will perform an installation audit prior to start-up.</p> <p>Unless stated otherwise in this proposal, service and/or maintenance for this equipment are not included. Our company product support service group will be glad to quote the end user of this equipment for those services under a separate proposal.</p> <p>All equipment needed to perform any loading or unloading of the equipment supplied by Holt Power Systems is the responsibility of the buyer.</p> <p>Holt Power Systems limits the scope of supply for this quotation to the equipment and services listed in our bill of material. Unless specifically listed in our bill of material, equipment not indicated is to be supplied by others. We have detailed the equipment proposed in the bill of material. Please carefully review it to be certain it meets your requirements.</p> <p>No NETA, infrared scanning, meg-testing or other third party testing is included unless expressly indicating in writing above.</p>

We reserve the right to correct any errors or omissions.

Contracts which include penalty or liquidated damage clauses for failure to meet promised shipping dates are not acceptable or binding on Holt Power Systems, unless accepted and confirmed in writing by an officer of Holt Power Systems and its headquarters.

Holt Power Systems standard terms and conditions are included in the quotation and hereby become part of this quotation. These same terms need to be noted on any purchase order received by Holt Power Systems.

Holt Power Systems will not be responsible for any labor or material charged by others associated with the start-up and installation of this equipment unless previously agreed upon in writing by Holt Power Systems. Start-ups are to be conducted between Monday through Friday during normal business hours and excluding nights, weekends, or holidays unless agreed otherwise in writing. Otherwise our standard overtime rates will apply.

We value your confidence in us, and the products we represent and appreciate your business. If there are any terms, conditions, or any other aspect of this quotation you do not understand, please contact us immediately and we will gladly clarify.