



PUBLIC WORKS

411 N Prospect Ave
Itasca, Illinois 60143-1795
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www.itasca.com

MEMORANDUM

To: Carie Anne Ergo, Village Administrator

From: Ross Hitchcock, Director of Public Works *R.H.*

Date: August 21, 2019

Subject: 2019 Three-Year Maintenance Proposal for the WWTP Emergency Electrical System

Introduction

We have requested quotes for a three-year maintenance agreement from Altorfer Power Systems and Illini Power Products for the maintenance of 3 industrial generators providing emergency power to the WWTP. These generators provide emergency power to the WWTP in case of a power outage. Proper maintenance will ensure the generators, load banks, and transfer switches perform properly when needed. The 20% increase is due to additional labor and fuel testing.

Altorfer Power System	\$34,514
Illini Power Products	\$37,329

Previous three-year contract: \$27,525

Discussion

I request the Board waive the bidding process and accept Altorfer Power System's low quote of \$34,514. Altorfer Power Systems is the factory authorized dealer for Caterpillar equipment, and they have performed the annual maintenance since the WWTP went on-line.

Staff Recommendation

I recommend this item be forwarded to the Committee of the Whole meeting on September 3, 2019 for consideration and approval.

After Action Steps

Attachments

Proposal from Altorfer Power Systems.
Proposal from Illini Power Products
Resolution

April 25, 2019
Revision: August 14, 2019

Village of Itasca
550 W. Irving Park Road
Itasca, IL 60143
Attn: Jeff Kinderman
Office Tel: 630 202 3341
Email: jkindermann@itasca.com
Customer Number: 1904501
Quote Number: 212971-02

Dear Jeff,

Thank you for the opportunity to provide a proposal for the maintenance of your emergency generators. Altorfer Power Systems is the only factory authorized source for sales, service, warranty and parts for Caterpillar equipment in the Chicago area. Because of that we are able to offer an Extended Oil Drain Intervals on your Engine. This program is only available from your Caterpillar Dealer.

Some of the benefits are:

- **Lower Cost of Ownership**
- **Reduction of the Your Carbon Footprint**
- **3 Year Fixed Costs on Preventive Maintenance Including Oil Costs**
- **Maintain Caterpillar Warranty**
- **Be Part of a Global Effort to reduce oil consumption.**

MONTHLY WALK AROUND INSPECTION:

Altorfer recommends that your generator be inspected monthly by an individual with basic mechanical knowledge and inspects the following items:

1. Walk around inspection: Check engine, radiator and generator for leaks, debris, foreign objects, broken or missing parts.
2. Belts: Inspect for worn, broken or loose belts.
3. Cooling system: Maintain proper coolant level
4. Block Heater: Check for proper operation
5. Engine Oil Level: Check and maintain proper engine oil level
6. Fuel System: Inspect for leaks or cracked piping
7. Batteries: Check for loose connections, corrosion and general battery condition (electrolyte level if possible)
8. Gauges and Control Panel: Inspect for broken gauges, check warning lights for operation
9. Battery Charger: Inspect for proper operation

ANNUAL ADVANTAGE GOLDSM SERVICE:

Altorfer recommends that Advantage GoldSM Inspection and Maintenance be performed on your generator by an experienced and factory trained technician. See our Advantage GoldSM breakdown for the 53-point inspection and maintenance details.

ANNUAL LOAD BANK TESTING:

Altorfer recommends an annual load bank test on standby generators if, the unit does not run at 50% or greater load at least one hour monthly. Load bank testing will:

- Eliminate wet stacking by burning off un-burnt fuel, oil and carbon in the cylinders and exhaust system.
- Exercise and test the unit's fuel and cooling systems.
- Evaporate moisture from inside the generator and engine.

ADVANTAGE GOLDSM SERVICE

During Altorfer's Advantage Inspection and Maintenance, our factory-trained technician will perform the maintenance and submit a written report on the following systems:

Cooling System

- Radiator/Heater Exchanger
- Antifreeze Protection and Level
- Hoses and Connections
- Fan Drive Pulley and Fan
- Fan Belt(s)
- Jacket Water Heater(s)
- Water Pump(s)
- Thermostat(s)
- Laboratory Analyzed Engine Coolant Sample

Fuel System

- Day Tank Level and Gauge
- Fuel Line and Connections
- Governor and Controls
- Fuel Pressure
- Change Fuel Filter(s)**

Air Induction and Exhaust

- Air Filters(s)
- Air Filter Service Indicator(s)
- Air Inlet System
- Turbocharger(s)*
- Exhaust Manifold(s)
- Exhaust System
- Valves and Rotators (at valve adjustment only)
- Louver Operation

Lube Oil System

- Change Oil and Filter(s)**
- Laboratory Analyzed Engine Oil Sample
- Magneto/Distributor
- Crankcase Breather

Starting System

- Check Battery(ies)
- Check Specific Gravity
- Battery Charger
- Starting Motor(s)
- Alternator *

Engine Monitors, Safety Controls and Control Panel

- Gauges
- Safety Controls
- Remote Annunciator/Alarms*
- Start Controls/Manual and Auto
- Voltmeter
- Ammeter
- Frequency Meter
- Circuit Breaker

Generator

- Bearings
- Slip Rings and Brushes*
- Space Heater(s)*
- Vibration Isolator*
- Wiring Connections
- Cable Connections
- Maintain Water Separator *
- Grease Generator Bearings*
- Lubricate Fan Pulley

Gas Engines Only

- Gas Line and Connections
- Carburetor and Linkage
- Oil Pressure
- Ignition System

*If Applicable

**Dispose of waste per EPA regulations

TRANSFER SWITCH MAINTENANCE:

Altorfer recommends an annual transfer switch inspection and maintenance. Transfer switch inspections and maintenance can identify and locate potential problems before they occur. This service will increase reliability and reduce the chance of failure during a power outage. Altorfer's transfer switch services comply with NFPA 110 Section 8.3.5 2005 edition requirements.

AUTOMATIC TRANSFER SWITCH MAINTENANCE SCOPE:**10 Point Inspection:**

- 1) Inspect for moisture or wetness, past or present
- 2) Inspect insulating materials for deterioration due to excessive heat
- 3) Inspect control relay contacts for corrosion or discoloration, due to excessive heat
- 4) Conduct a test by simulation a normal power source failure.
- 5) Check operating current level versus rating.
- 6) Record all time delay settings, pickup and dropout setting and timer settings.
- 7) Record and compare the voltage drop across main contacts.
- 8) Check and record cable connections and contacts with infrared thermometer.
- 9) Check all cables and control wire connections to the ATS controls, sensing panel and other system components. Tighten if necessary.
- 10) Check the battery in the controller



April 25, 2019
 Revision: August 14, 2019

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 550 W. Irving Park Road
 Itasca, IL 60143
 Attn: Jeff Kinderman
 Office Tel: 630 202 3341
 Email: jkindermann@itasca.com
 Customer Number: 1904501
 Quote Number: 212971-02

Caterpillar 3516 SN: 0SBJ01052

	<u>2019</u>	<u>2020*</u>	<u>2021</u>
	9/1/19-8/31/20	9/1/20-8/31/21	9/1/21-8/31/22
<input type="checkbox"/> Annual Advantage Gold Service (Includes Laboratory analyzed Engine Oil and Coolant Samples)	\$ 1,380.00	\$ 3,410.00*	\$ 1,463.00
2019: Includes filter change. No oil change. 2020: Includes engine oil and filter change. 2021: Includes filter change. No oil change.			
Quarterly Oil Samples (3) Oil Samples \$ 125.00 each Quarterly oil sample is taken alongside the Gold Service to ensure the engine oil is in proper working condition. Per Extended Oil Drain Interval Specifications.	\$ 375.00	\$ 375.00	\$ 375.00
<input type="checkbox"/> Annual Load Bank Test 2000 kW 480V 2 Hour run up to 100%. – (2 Techs required)	\$ 2,502.00	\$ 2,578.00	\$ 2,654.00
<input type="checkbox"/> Transfer Switch Service (Total of 1) 10-Point Inspection -\$ 160.00 per Switch	\$ 160.00	\$ 160.00	\$ 160.00
<input type="checkbox"/> Fuel Sample Per NFPA 110 maintenance guidelines	\$ 281.00	\$ 281.00	\$ 281.00
<u>Total Service Amount</u>	<u>\$ 4,698.00</u>	<u>\$ 6,804.00*</u>	<u>\$ 4,933.00</u>

- BASED ON MONDAY-FRIDAY REGULAR HOUR LABOR RATES
- PRIMARY AIR FILTER CHANGED AS NEEDED AT ADDITIONAL CHARGE
- BATTERIES AND COOLANT CHANGED AS NEEDED AT ADDITIONAL CHARGE
- QUOTE MUST BE ACCEPTED WITHIN 90 DAYS TO SECURE PRICING

***Denotes Oil Change Year (2020)**

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Caterpillar C15 SN: 0C5E02819

	<u>2019</u>	<u>2020</u>	<u>2021</u>
	9/1/19-8/31/20	9/1/20-8/31/21	9/1/21-8/31/22
<input type="checkbox"/> Annual Advantage Gold SM Service (Includes Laboratory analyzed Engine Oil and Coolant Samples)	\$ 1,500.00	\$ 1,545.00	\$ 1,591.00
<input type="checkbox"/> Annual Load Bank Test 500 kW 480V 2 Hour run up to 100%.	\$ 1,222.00	\$ 1,258.00	\$ 1,295.00
<input type="checkbox"/> Transfer Switch Service (Total of 1) 10-Point Inspection -\$ 160.00 per Switch	\$ 160.00	\$ 160.00	\$ 160.00
<input type="checkbox"/> Fuel Sample Per NFPA 110 maintenance guidelines	\$ 281.00	\$ 281.00	\$ 281.00
<u>Total Service Amount</u>	<u>\$ 3,163.00</u>	<u>\$ 3,244.00</u>	<u>\$ 3,327.00</u>

- BASED ON MONDAY-FRIDAY REGULAR HOUR LABOR RATES
- BASED ON PERFORMING THE C9 AND C15 LOAD BANK TESTS THE SAME DAY
- PRIMARY AIR FILTER CHANGED AS NEEDED AT ADDITIONAL CHARGE
- BATTERIES AND COOLANT CHANGED AS NEEDED AT ADDITIONAL CHARGE
- QUOTE MUST BE ACCEPTED WITHIN 90 DAYS TO SECURE PRICING

April 25, 2019
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 Quote Number: 212971-02

Caterpillar C9 SN: 0C9E02072

	<u>2019</u>	<u>2020</u>	<u>2021</u>
	9/1/19-8/31/20	9/1/20-8/31/21	9/1/21-8/31/22
<input type="checkbox"/> Annual Advantage Gold SM Service (Includes Laboratory analyzed Engine Oil and Coolant Samples)	\$ 1,267.00	\$ 1,305.00	\$ 1,344.00
<input type="checkbox"/> Annual Load Bank Test 300 kW 480V 2 Hour run up to 100%.	\$ 1,005.00	\$ 1,035.00	\$ 1,066.00
<input type="checkbox"/> Transfer Switch Service (Total of 1) 10-Point Inspection -\$ 160.00 per Switch	\$ 160.00	\$ 160.00	\$ 160.00
<input type="checkbox"/> Fuel Sample Per NFPA 110 maintenance guidelines	\$ 281.00	\$ 281.00	\$ 281.00
<u>Total Service Amount</u>	<u>\$ 2,713.00</u>	<u>\$ 2,781.00</u>	<u>\$ 2,851.00</u>

- BASED ON MONDAY-FRIDAY REGULAR HOUR LABOR RATES
- BASED ON PERFORMING THE C9 AND C15 LOAD BANK TESTS THE SAME DAY
- PRIMARY AIR FILTER CHANGED AS NEEDED AT ADDITIONAL CHARGE
- BATTERIES AND COOLANT CHANGED AS NEEDED AT ADDITIONAL CHARGE
- QUOTE MUST BE ACCEPTED WITHIN 90 DAYS TO SECURE PRICING

Village of Itasca
Customer Number: 1904501
Quote Number: 212971-02

Warranty:

Altorfer warrants the work performed to be free from defects in material and workmanship for a period of twelve months. Altorfer's obligation under this warranty shall be limited to the repair or replacement, whichever Altorfer elects, at Altorfer's premises, of those parts previously installed, or labor previously performed, which are found, upon its inspection, to be defective. Such remedy shall constitute Customer's sole and exclusive remedy and Customer hereby agrees that no other remedy (including, but not limited to, claims for INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, OR ANY CAUSE, LOSS, ACTION, CLAIM OF DAMAGE, INCLUDING LOSS OF TIME, WHATSOEVER, OR INJURY TO PERSON OR PROPERTY OR ANY OTHER CONSEQUENTIAL DAMAGE OR INCIDENTAL OR ECONOMIC LOSS) shall be available to Customer. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES FOR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nonstandard repair work will be performed upon request of Customer and according to Customer's instructions but such work will carry absolutely no warranty whatsoever.

FINANCIAL TERMS:

Net cash 30 days upon receipt of invoice, with credit approval. Equipment and services will be invoiced at the contracted amount when project is completed. Retainers are not allowed unless previously negotiated and are identified in this proposal. Late charges of 1-1/2% per month will be assessed for late payments and customer will also be responsible for any collection costs and expenses, including reasonable attorney's fees. Sales tax is **NOT** included in the purchase price and will be charged at the current tax rate, if applicable.

ADDITIONAL TERMS and CONDITIONS:

The scope of supply for this quotation is limited to the equipment and services listed in this proposal. Unless specifically listed in our bill of material, equipment and services not indicated are to be supplied by others. We reserve the right to correct any errors or omissions. Customer's signature on this quotation or the issuance of a purchase order or other acknowledgement by customer for the equipment and services shall constitute acceptance of this quotation subject only to the terms and conditions set forth herein and notwithstanding any terms and conditions contained in any such purchase order or other acknowledgment or communication from the customer which are different from or in addition to the terms and conditions of this quotation. Changes to the terms of this quotation may only be made by the express written agreement of Altorfer Power Systems. Altorfer Power Systems shall not be responsible for any consequential, special, indirect or liquidated damages hereunder or for any manufacturer or other delays beyond Altorfer's control. Altorfer Power Systems will not be responsible for any labor or material charges by others associated with the supply of our services and equipment unless previously agreed upon, in writing by Altorfer Power Systems. This quotation expires in 90 calendar days or sooner with notice and is subject to prior sale. The prices stated herein are subject to increases if the order is not executed within 90 calendar days from order date. Buyer may terminate or cancel an order by written notice and upon payment of appropriate charges based upon Altorfer's actual expenses and a reasonable profit. Mileage Rate is based on Crude World Trade Index at time of quotation. Altorfer reserves the right to increase the effective Mileage Rate charged to reflect increases in the Index at the time services are provided.

Thank you for your business and please call me if you have any questions or to schedule service.

Acceptance: _____
Customer Signature _____
Purchase Order # _____
Date _____

Altorfer Power Systems

Ken Chiakas
Altorfer Power Systems
Product Support Solutions Representative
Phone: 630-688-3227
Fax: 630-559-8438
Ken.Chiakas@Altorfer.com



444 Randy Road Carol Stream, IL 60188
(630) 462-7280 Fax (630) 462-7444
www.illinipwrprod.com

July 31, 2019

Village of Itasca Public Works
411 N. Prospect Ave.
Itasca, IL 60143

Attn: Mike Kusles

3 Year Planned Maintenance Program

Enclosed is an introduction to our business, Illini Power Products Company, and a proposal for our planned maintenance services. Illini Power Products Company is the leading generator maintenance and emergency service provider in the Chicagoland area. We are a family owned and operated business that has been growing for thirty years. We service all make and model generators in every industry. Illini Power Products Company offers support 24-7 and 365 days of the year.

The purpose of this letter is to present our generator services to you. I have prepared a maintenance proposal specific to your equipment needs and requirements. Illini Power Products Company will provide you with the documentation and testing that is required for your building and also mandated by the NFPA.

We separate ourselves from our competition by maintaining a full fleet of rental generators ready to deploy in an emergency situation. We also have a fully staffed parts warehouse along with factory trained technicians. Our technicians are prompt, courteous and knowledgeable. They will spend the time to diagnose and accurately analyze your equipment and explain it to you in a detailed understandable manner.

Please review the following material for your annual generator maintenance pricing. Do not hesitate to contact me to have your questions and concerns answered. Thank you for this opportunity and I look forward to hearing from you.

Sincerely,

Jerry Birkenheier

Jerry Birkenheier
Product Support Specialist



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July 31, 2019

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3 Year Annual Planned Maintenance 2020-2022

Caterpillar 300kw

The full Power Protection Plan includes two visits, 1 Major PM and 1 Minor PM. Each PM visit will include 1 oil sample taken for analysis per PM visit. A coolant sample will be taken once a year during a PM visit. Fuel sample will be taken once a year for analysis. Each service will include the 35 Point Inspection detailed on Scope of Service. There will be an annual replacement of the oil and oil filters and the fuel filters at the time of the Major PM. ATS Testing will be performed at each service in accordance with current NFPA 110 standards. The two hour load bank test once a year will be performed in conjunction with the Minor PM Visit.

Per Year \$2,498.00

Caterpillar 2000kw

The full Power Protection Plan includes quarterly visits, 1 Major PM and or filter change only, 3 Minor PM's per year, each PM visit will include 1 oil sample taken for analysis per visit. A coolant sample will be taken once a year during a PM visit. Fuel sample will be taken once a year for analysis. Each service will include the 35 Point Inspection detailed on Scope of Service. There will be the replacement of the oil and oil filters and the fuel filters at the time of the Major PM in 2020 - \$8644.00 There will be the replacement of the oil filters, top off oil, no oil change to be performed in 2021 - \$3178.00 There will be the replacement of the oil and oil filters and the fuel filters at the time of the Major PM in 2022 - \$8644.00 ATS Testing will be performed at each service in accordance with current NFPA 110 standards. The two hour load bank test once a year will be performed in conjunction with one of Minor PM Visits.

Total for 3 years \$20466.00

Caterpillar 500kw

The full Power Protection Plan includes two visits, 1 Major PM and 1 Minor PM. Each PM each visit will include 1 oil sample taken of the oil for analysis per PM visit. A coolant sample will be taken once a year during a PM visit. Fuel sample will be taken once a year for analysis. Each service will include the 35 Point Inspection detailed on Scope of Service. There will be an annual replacement of the oil and oil filters and the fuel filters at the time of the Major PM. ATS Testing will be performed at each service in accordance with current NFPA 110 standards. The two hour load bank test once a year will be performed in conjunction with the Minor PM Visit.

Per Year \$3,123.00

The pricing for the service quoted is based upon Illini Power Products scheduling in your area, any special service requested may incur additional charges. Any additional time incurred on the job site due to interference or circumstances beyond the control of the technician that is not included in the maintenance agreement will be billed at Illini Power Products' current time and material rate. All other part replacements and repairs will be performed on an "as needed" basis to keep the price as low as possible. Any additional parts and or repairs will be quoted prior to performing work and must be approved by authorized personnel.

Full plan for 3 years

P.O. Number: Total annual PO amount: \$

Signed Date



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Scope of Services

Minor Inspection

Air Intake & Exhaust System Checks

Inspect air cleaner element(s) and intake system for contaminants and worn/broken components.

Inspect exhaust system including piping, silencer, and rain cap.

Visually inspect turbocharger.

Inspect louver and louver motor operation.

Inspect air ducting.

Battery & Battery Charging System Checks

Batteries and battery terminals are cleaned.

Battery cables are inspected for fraying and bad or loose crimps. Connections are tightened.

Checked for electrolyte level and/or load test. Distilled water is added if possible.

Inspect battery charger for proper operation.

Inspect battery charger connections. Charging amps and volts are recorded.

Inspect battery charging alternator bearings and connections. Charging volts are recorded.

Inspect starting motor electrical connections.

Engine Cooling System Checks

Inspect coolant hoses for wear, leaks, and connections. Tighten clamps when necessary.

Inspect coolant for temperature protection, nitrate level, condition, and level. Coolant topped off (up to one half gallon)

Conduct 3-way test strip coolant test. Record findings.

Inspect radiator/heat exchanger and cap for leaks and obstruction.

Check coolant block heater and external thermostat operation (where applicable).

Inspect water pump drive belt(s) for wear, alignment, and tension.

Inspect water pump for leaks and bearing condition.

**Coolant Analysis Testing available on request with additional cost.

Engine & Lubrication System Checks

Check engine oil for contamination and level. Oil is topped off if necessary (up to one quart)

Check engine ventilation system for leaks, routing, and blockages.

Inspect spark ignited ignition system.

**Engine oil Analysis available on request with additional cost.



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Fuel System Checks

Inspect fuel filter(s) for hours of usage, leaks and sediments.
Inspect water separator and drain.
Inspect fuel lines condition. Tighten hose clamps when permissible.
Inspect injector and injection pump lines.
Inspect governor controls and linkage for operation.
Inspect day tank, subbase tank and fuel line connections.
Check fuel tank level.
Check for water in day tank or subbase tank.
Test pump and check controls if applicable.
** Fuel Analysis is available on request with additional cost.

Generator Systems Controls & Connections Checks

Inspect engine wire harness and sending units.
Inspect generator wire harness.
Inspect load lead and electrical connections.
Check breaker operation.
Check generator controller operation
Inspect generator controller circuit boards.
Test lamps and indicators.

Engine/Generator Operation Checks

Test run generator without load (with load with signed approval) and record oil pressure, running temperature, charging volts, and condition.
Check engine and generator safety devices operation (when applicable).
Check for leaks, noises, smoke and vibration.

Automatic Transfer Switch Checks

Inspect load lead connections.
Inspect all auxiliary contacts.
Inspect transfer switch wiring and connections.
Inspect transfer switch circuit boards, relays, and time delays.
Inspect transfer switch exercise clock settings.
Test operation of transfer switch if possible.
Conduct remote start test transfer test.
Verify that generator volts and frequency match the utility volts.



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Major Service

Includes Minor Inspection

Fuel Filter & Lube Oil Filter Service

Replace lube oil filter primary and bypass filter(s) (where applicable)
Replace engine lube oil
Replace engine fuel filter(s) (where applicable)
Dispose of waste oil environmentally and responsibly.

Annual Inspection of essential components

Inspect generator bearing and slip rings (when accessible).
Inspect governor oil level.
Inspect/grease drive bearings (where applicable).
Inspect gear housing level (where applicable).

Supplemental Services

**Lube Oil, Coolant, and Fuel Analysis available at an additional charge
Load Banking Services reduce wet-stacking and carbon build up.
Fuel Polishing Services restores fuel to original specifications.
Generator and Transfer Switch Rental provides full range of temporary power solutions.

All other part replacements and repairs will be performed on an "as needed" basis to keep the price as low as possible.

Any additional parts and/or repairs will be quoted prior to performing work and must be approved by authorized personnel