

**EXHIBIT "A"**  
**Hidalgo County Sheriff's Office**  
**"Service & Maintenance to Generators located at Jail-Law Enforcement Cntr-Etc."**  
**RFB NO. 2011-016-00-00-MEG**

**SPECIFICATION**

Hidalgo County Sheriff's Office is seeking to contract with a qualified vendor to conduct all of Services/ Maintenance and Repair of Generators on a Quarterly, Annually and/or Triennial (every third year) as required with a schedule to be provided (upon request) by the Hidalgo County Sheriff's Office, after award of bid/contract to awarded bidder. These services will be provided in accordance with these specifications and the manufacturer recommendations. Bid should include all labor and materials to properly service and maintain as necessary, such as PM1, PM2, PM3, Load Bank Testing, Automatic Transfer, Megohmmeter and Fuel Annual etc..

The Generators to be maintained consists of the following:

#	Manu factor	KW	Serial #	BUILDING	LOCATION
1	Caterpillar 3512 B	750	1GZ00708	Adult Det. Cent.	701 El Cibolo Rd. F.M. 162
2	Caterpillar 3512 B	750	1GZ00709	Adult Det. Cen.	701 El Cibolo Rd. F.M. 162
3	Caterpillar 3412 C	600	3FZ02548	Law Enforcement	711 El Cibolo Rd. F.M. 162
4	Caterpillar D 304	350	92B03273	Motor Pool	713 El Cibolo Rd. F.M. 162
5	Kohler 250 (Detroit Diesel) 12.7L/model # 250REOZ DB	250	2095562	Academy	715 El Cibolo Rd. F.M. 162
6	Generac SD 100 (Mitsubishi 4D34-T 3.9 L / model # 7515510100)	100	2091520	Courthouse Sally Port	100 N. Closner, Edinburg, Tx.

**REQUIREMENTS**

1. Vendor(s) interested in participating in this bid process, must be authorized to link onto the ISO switchboard (hardware), with a twin CAT system build 959 version 2.9 made by Beck Hoff (software).
2. Participants must be authorized factory trained and certified to work on all Caterpillar equipment and its switch gear (I S O Links, Zenith and ASCO series 300), along with Kohler (Detroit Diesel), Generac SD 100 (Mitsubishi) equipment and its switch gear.
3. Participants must also use only genuine Caterpillar parts, Detroit Diesel and Mitsubishi parts (filters oil, air, diesel, and misc. parts, **equal or better**) and able to provide service/ maintenance and repair to generators in accordance with the National Electric Code (N E C), the life Safety Code, and the National Fire Protection Association and the Joint Commission.
4. Technicians must be available (24) twenty-four hours (7) seven days a week.
5. Please provide with your bid a technician fee on an "As needed basis" per hour (normal hours and after hours) plus the percentage mark up rate for parts for the repairs of the mentioned generator (s). Additionally, awarded vendor at the time of submission of invoices to the Hidalgo County Sheriff's Office, awarded vendor must provide invoices for parts purchased to repair generators, for auditing purposes and verify the mark up rate.

**TERMS & CONDITIONS**

1. All costs and expenses associated with the preparation and submission of (bid, proposals and / or quotes) shall be responsibility of the bidder and no reimbursements for such charges or expenses shall be passed onto **HIDALGO COUNTY**.
2. The term of the contract will be for two (2) years with the county's option to extend for additional one (1) year terms under the same rates, terms and conditions. No bid price increase, otherwise same price for any extension to remain firm.

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3. Hidalgo County reserves the right to continue this bid for additional sixty (60) days Grace period at the end of the contract term for unforeseen delay in award of new bid for next contract term.
4. The contract shall remain in effect until contract expires, delivery/completion of services ordered or terminated by either party with a thirty (30) day written notice prior to any cancellation.
5. Hidalgo County reserves the right to award the bid to the low bidder meeting all requirements and specifications.
6. Hidalgo County reserves the right to award on an "all or none basis".
7. Vendor shall provide services at no additional cost other than that stated on Exhibit "B" for normal maintenance and repairs.
8. Hidalgo County reserves the right to reject any or all bids submitted, if it is in the best interest to do so.
9. The awarded vendor will maintain all insurance requirements and its limits through out the agreement term, as described and listed in Exhibit "C" Insurance requirements.
10. Hidalgo County has the authority to utilize State Contracts from its membership with their existing or new cooperatives when ever it is in the County's best interest to do so.
11. Hidalgo County reserves the right to hold bids for a period of ninety (90) days without taking any action.
12. After bid is awarded and low bidder s default s in meeting the general instructions to bidders and/or comply with contract agreement, Hidalgo County reserves the right to seek services from the next low bidder. In such event, County shall charge the successful bidder the difference for any additional cost of such item.

### **MAINTENANCE AND SERVICES**

**PM LEVEL 1** Services are recommended Quarterly

**PM LEVEL 2** Services are Recommended Annually

**PM LEVEL 3** Services are Recommended every Three (3) years

**TRANSFER SWITCH SCHEDULED MAINTENANCE** – Recommended Annually

**LOAD BANK TESTING** Recommended Annually

An annual fuel sample with a report will also be required for all generator fuel storage tanks once a year. With an optional price of service for transfer switch scheduled maintenance and load bank testing on all six (6) generators.

### **DETAILED DESCRIPTION OF SCHEDULED MAINTENANCE SERVICE LEVELS**

#### **Scheduled Maintenance**

#### **PM LEVEL 1 – Services are recommended Quarterly**

#### **GENERAL**

- Visual Inspection – Visual inspection of overall condition of unit to identify foreign objects, loose or broken fittings, guards, and components.

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- Wipe off unit – Clean oil, coolant, fuel and acid deposits. Police generator area.

### **COOLING SYSTEM**

- Radiator/Heat Exchanger – Visual inspection for leaks, damage, and debris. Check louver operation.
- Coolant – Visual inspection for correct level and condition of coolant (rust, oil, and contaminants). Check coolant conditioner concentration and temperature protection. Check filler cap gasket and sealing surface.
- Hoses and Connections – Visual inspection of all hoses for deterioration. Check tightness of connections.
- Fan Drive Pulley and Fan – Check for loose or worn pulleys and lube fan drive bearing. Check fan operation and clearance.
- Fan Belts – Inspect for wear or deterioration. Check tension and adjust as necessary.
- Jacket Water Heater – Inspect for proper operation. Check thermostat settings for proper coolant temperature.
- Water Pump – Visual and operational inspection for leaks or unusual noises.

### **FUEL SYSTEM**

- Fuel Tank – Visually inspect fuel tank system for leaks and fuel level. Test day tank pump for proper operation. Inspect fuel condition for contaminants.
- Water Trap/Separator – Drain water from fuel tank or water separator when possible.
- Fuel Lines and Connections – Inspect for leaks and tightness of connections. Check line brackets.
- Governor and Controls – Inspect governor oil level. Inspect controls and linkage for proper operation. Add oil as necessary.
- Fuel Filters (Primary/Secondary) – Inspect for damage, leaks and proper operation.
- Fuel Pressure – Operational check of gauge and correct pressure.

### **AIR INDICATION and EXHAUST SYSTEM**

- Air Filter Service Indicator – Note reading. Inspect for proper operation. Reset Indicator.
- Air Filter – Inspect. Clean as necessary
- Air Inlet System – Inspect piping and air filter housing for damage, loose connections, and evidence of leaks. Clean air filters housing if air filter is cleaned or replaced. Check housing seals and gaskets.
- Turbocharger – Inspect for oil leakage or exhaust leakage. Check for unusual noises and proper operation.
- Exhaust Manifold – Inspect for damage, loose or missing hardware, evidence of exhaust leakage and wet-stacking. Load bank recommendation, inspect for oil slobbering.
- Exhaust System – Inspect silencer and piping for damage, corrosion, or leakage. Check rain cap. Check supports for vibration damage and loose connections.

### **LUBE OIL SYSTEM**

- Oil Level – Inspect for correct oil level and contamination.
- Visual inspect unit for leaks.
- Oil Pressure – Operational check of gauge for correct pressure. Operational and visual inspection of prelube pump.
- Crankcase Breather – Inspect for proper operation. Check connections and inspect hose for deterioration. Note excessive blowby.
- Scheduled Oil Sample – Obtain oil sample for analysis (optional for Level 1).

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**STARTING SYSTEM**

- Batteries – inspect for damage or leakage, clean acid neutralizer. Clean and tighten all battery cable connections.
- Batteries (Specific Gravity) – Check electrolyte level and specific gravity. Fill cells with distilled water as necessary
- Battery Charger – Inspect for proper operation, loose terminals, and deteriorated wiring.
- Starting Motor – Inspect electrical connections and wiring. For air starters, inspect oil jar and feeder operation. Operational check for abnormal engagement and cranking noises.
- Alternator – Inspect for proper operation, loose connections, and mounting hardware. Check belts, pulley and voltage output.

**ENGINE MONITORS AND SAFETY CONTROLS**

- Safety Controls – Check for: loose connections, and wiring deterioration.
- Remote Annunciator and Alarms – Inspect and test all panel and system alarms.

**CONTROL PANEL**

- Start Controls – Manual/Auto – Operational check for proper operation. Check automatic start (if allowed).
- Voltmeter – Operational check for correct readings. Check voltage level.
- Ammeter – Operational check for correct readings, if load is available.
- Frequency Meter – Operational check for correct readings. Load and no load readings, if possible.

**Scheduled Maintenance**

**PM LEVEL 2 Services are Recommended Annually**

(Includes all services Level 1 -Inspection, as well as the following).

**FUEL SYSTEM**

- Fuel Filter – Replace. Inspect for proper sealing and operation.

**LUBE OIL SYSTEM**

- Oil and Filters – Change. Inspect all gaskets and seals.
- S.O.S – Obtain oil sample for analysis.
- Crankcase Breather – Inspect and clean or replace if applicable.

**AIR INDUCTION SYSTEM**

- Turbocharger – Check for oil leakage or unusual noises.
- Air Filter – Inspect. Clean or replace as necessary.

**ENGINE MONITORS AND SAFETY CONTROLS**

- Gauge Accuracy – Check oil pressure, water temperature, and alternator gauge for accuracy.
- Safety Controls – Inspect for proper operation, loose connections, and wiring deterioration. Check all safety controls for proper operation.
- Remote Annunciator and alarms – Inspect and test alarms for proper operation.

**GENERATOR**

- Generator Rear Bearing – Lubricate if applicable.
- Vibration Isolators – Check for proper adjustment and condition.

**CONTROL PANEL**

- Circuit Breakers – Inspect for free movement and tight connections, if accessible.

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**Scheduled Maintenance**

**PM LEVEL 3 Services are Recommended every Three (3) years**

(Includes All Services Previously Listed Under **Level 1 and Level 2.** As Well As the Following)

**COOLING SYSTEM**

- Coolant – Drain, flush and replace coolant.
- Thermostats – Replace
- Fan Belts – Replace
- Hoses – Replace all cooling system hoses including jacket water heater hoses.

**STARTING SYSTEM**

- Batteries – Test
- Alternator Belt - Replace.

**AIR INDUCTION AND EXHAUST SYSTEM**

- Air Filter – Replace
- Adjust Valves and replace cover gaskets (as dictated by manufacturer's Operation and Maintenance Guide).

**TRANSFER SWITCH SCHEDULED MAINTENANCE** – Recommended Annually

**INTERIOR WIRING COMPONENTS**

- Perform visual inspection of all wiring and connections for signs of tracking, overheating, and insulation deterioration.
- Check and tighten, where necessary, all control circuit wiring terminals.
- Check manual switches for free movement and contact continuity.
- Check all time delay settings and adjust to the customer's specifications.
- Check condition of main and arcing contracts and auxiliary contracts.
- Check all common and ground wires. Measure and record resistance to ground readings.
- Check lug connections and mounting insulator bolts (de-energized switch).
- Megger test generator windings and rotor for proper resistance.
- Check for proper transfer operation and sequencing of time control relays.
- Calibrate all phase and voltage sensitive relays.
- Perform infrared heat scan on all cable connections. Clean and torque as necessary.

**ENCLOSURE**

- Wipe down.
- Clean interior of enclosure and remove accumulated dust and/or dirt.
- Check door closure, locking bar, and mechanism for proper operation.

**MISCELLANEOUS**

- Record findings of the inspection. Note corrective action taken.
- Report unsafe conditions.
- Report recommendations for replacement of major components.

**LOAD BANK TESTING Recommended Annually** (Required annually for most applications)  
**(SEE NFPA 110 & NFPA 99)**

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In addition to your Scheduled Maintenance services, we also recommend having a two – (2) hour Load Bank Test performed annually, in conjunction with your regular service. This test will prevent a condition known as "wet stacking", which is the presence of carbon particles, unburned fuel, acids and condensed water in the exhaust system, which accumulates due to incomplete combustion caused by low combustion temperatures. The presence of continual black smoke during operation is an indication what wet stacking is occurring.

**The NFPA 110** states the following regarding Load Bank Testing (this also applies to **NFPA 99** for Healthcare Facilities, pertinent information is underlined):

6-4 Operational Inspection and Testing.

6-4.1\* Level 1 and Level 2 EPSS's, including all appurtenant components, shall be exercised under load at least monthly.

Exception: If the generator set is being used for standby power or for peak load Shaving, such use shall be recorded and shall be permitted to be substituted for scheduled operations and testing of the generator set, provided the appropriate data are recorded.

6-4.2\* Generator sets in Level 1 and Level 2 service shall be exercised at least once monthly, for a minimum of 30 minutes, using one of the following methods.

- (a) Under operating temperatures conditions or at not less than 30 percent of the EPS nameplate rating
- (b) Loading that maintains the minimum exhaust gas temperatures as recommended by the manufacturer.

The date and time of day for required testing shall be decided by the owner, based on facility operations

6-4.2.2 Diesel-powered EPS installations that do not meet the requirements of 6-4.2 shall be exercised monthly with the available EPSS load and exercised annually with supplemental loads at 25 percent of the nameplate rating for 30 minutes, followed by 50 percent of the nameplate rating for 30 minutes, followed by 75 percent of the nameplate rating for 60 minutes, for a total of 2 continuous hours.

In summary, the engine needs to be exercised at monthly intervals. This must be done at the manufacturer's recommended operating temperature, which can only achieved by running it under recommended load (usually 30 % to 50 % of the generator's designed capacity). If this is not possible due to the inability to transfer adequate building loads to the generator, a Load Bank Test will be required to satisfy the supplemental load requirement.

Load Bank Testing for a minimum of two continuous hours at 80-100 % of the nameplate rating on the customer's generator, which will exceed the requirements of the requirements of the National Fire Protection Association. Unless otherwise specified by the customer.

### **MEGOHMETER TESTING**

Test main stator, main rotor, exciter, and exciter rotor. Record data for reference

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**FUEL ANALYSIS – Recommended Annually**

Property	Test Methods (*)	Low Sulfur No. 1-D	No. 1-D	Low Sulfur No. 2-D	No. 2-D	No. 4-D
Flash Point C, min	D 93	38	38	52	52	55
Water and Sediment, % vol, max	D 2709 D 1796	0.05	0.05	0.05	0.05	0.05
Distillation temperature, C 90 % vole covered Min Max	D86	288	288	282 338		
Kinematic Viscosity, 40 C sCt Min Max	D445	1.3 2.4	1.3 2.4	1.9 4.1	1.9 4.1	5.5 24
Ash, % mass, max	D482	0.01	0.01	0.01	0.01	0.1
Sulfur, % mass,max	D2622	0.05	0.05	0.05	0.05	2
Copper strip corrosion, 3 hr at 50 C, max rating	D130	No. 3	No. 3	No. 3	No. 3	
Cetane number, min	D613	40	40	40	40	30
One of the following: 1.) Cetain index min 2.)Aromaticity, % vol, max	D976 D1319	40 35		40 35		
Ramsbottom carbon residue on 10 % distillation residue, % mass, max	D524	0.15	0.15	0.35	0.35	

Fuel analysis should include, but is not limited to testing for the following in accordance with ASTM D 975 Requirements for Diesel Fuel Oils (from Chevron "Diesel Fuels Technical Review", Copyright 1998, P.34):

**Market Volatility and Unit Price Adjustments:**

Hidalgo County recognizes that during periods of national crisis and unstable economic conditions, unforeseen price increases might affect costs for goods and services contracted on an annual basis. The following procedure may be employed to mediate price volatility:

- 1) **Requesting Price Adjustment:** Upon written request of the Vendor to the County Purchasing Agent, the County may review evidence of prevailing industry-wide market conditions that warrant an adjustment in bid prices contained in the contract.
  - A Vendor must tie any price change clause to an industry-wide or otherwise nationally recognized index, or some other form of verifiable document. Such written request must be accompanied by a certified copy of the supplier's advisory or notification to the vendor of the price changes.
  - The Vendor must put the Purchasing Agent on the mailing lists for such publications so that the Purchasing Agent can monitor said changes. Such membership shall be at no cost to the County.
  - The County Purchasing Agent retains the right to determine whether or not such proposed price changes are in the best interest of the County.
  - No price escalation will be authorized in excess of the amount of the increase referred to in the supplier's notice.
  - The County may only grant a price increase if the evidence presented is deemed reliable. Should the County allow a price increase, the approved price change shall be honored for all orders received by the vendor or contractor after the effective date of such price change. Approved price changes are not applicable to orders already issued and in process at time of price change.
  
- 2) **Price Reduction:** Vendor shall notify the County at the time when the Vendor's costs for items and/or supplies reduce due to stabilization in the market at which time prices for items on this

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contract shall be reduced accordingly. Failure by the Vendor to notify the County of a decrease in costs for items and/or supplies for which the Vendor was granted a price adjustment, may result in immediate termination of this contract and the County shall not be obligated to pay the Vendor the difference between the contract price and the price adjustment.

- 3) **Timeframe for Adjusted Price Increases:** Price increases are only valid for the quarter in which they are requested and approved. Prices shall return to the original contract price at the beginning of the following quarter unless a Vendor notifies the County in writing within ten (10) days of expiration of the quarter in which the price increase is in effect, that it desires to have the price increase continue or that the Vendor is requesting a different price increase for the following quarter. Such request must be supplemented with sufficient justification to demonstrate that the price increase remains necessary. The County Purchasing Department shall have sole discretion whether to grant the price increase extension. The County too, shall have discretion to unilaterally reduce, eliminate or extend a price adjustment to the Vendor at any time upon written notice from the County to the Vendor demonstrating justification for such reduction, elimination or extension of the price adjustment.
- 4) **Allowable Review Periods:** Price adjustment reviews may only be requested by the Vendor on a quarterly basis. However, the County may at its own discretion, conduct temporary price adjustment reviews at any time. The County Purchasing Agent and/or the County Auditor reserve the right to audit and/or examine any pertinent books, documents, papers, records or invoices relating directly to the contract transaction in question after reasonable notice and during normal business hours.
- 5) **Dollar Limit to Price Changes:** The total increase in contract price shall not exceed twenty-five percent (25%) of the original contract price during the contract term.

**ADDITIONAL INFORMATION**

Hidalgo County is requesting that any and all questions, inquiries, and clarifications regarding quotes, bids, proposals, or statements of qualifications be addressed to, Martha L. Salazar, Cppb, Purchasing Agent, Postal/Mailing: 2812 S. Business Highway 281, New Administration Building, Edinburg, Texas 78539  
**TELEPHONE INQUIRIES WILL NOT BE ACCEPTED.**

**ALL WRITTEN INQUIRIES WILL BE ACCEPTED VIA FACSIMILE NO LATER THAN, day, month date, 2010, BY 5:00 P.M.** RESPONSES TO SAID INQUIRIES WILL BE SENT TO ALL APPLICATIONS VIA FACSIMILE BY NO LATER THAN, **day, month date, 2010, BY 5:00 P.M.**