

## **Specifications for Emergency Generator Maintenance at West Tennessee Regional Office & Community Homes for Tennessee Department of Disability and Aging**

The State of Tennessee, Department of Disability and Aging (“DDA”) hereinafter shall be referred to as the “State” or “Agency”. The service provider hereinafter shall be referred to as the “Contractor.”

### **Scope:**

The Contractor shall provide all goods or services and deliverables as required, described, and detailed below and shall meet all service and delivery timelines as specified by this Contract.

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#### **General Scope of Contract**

A five (5) year Contract is requested because the required services are repetitive. A Contract term of five (5) years will allow uninterrupted service at a stable price. This is a comprehensive Contract to provide labor, materials, and equipment to perform services and work, as specified, on the emergency generators, as listed in section XVI. Services include, but are not limited to, inspection, preventive maintenance, testing, repair, and emergency service. Repair services shall include any/all peripheral equipment that is a component of the equipment under this Contract.

Contract Specified Service (“Planned Maintenance”): Contract Specified Services shall mean services provided, as per predetermined specifications, e.g. inspection and preventive maintenance (see sections XII, XIII, XIV and XV). This Contract Specified Services will have detailed written procedures in each section. The Contract Specified Services shall be invoiced at the awarded unit price. Hourly rates and parts do not apply.

Emergency and non-emergency services shall be invoiced at the awarded hourly labor rate that applies,

and parts, when applicable, at the parts cost that applies.

The Agency shall maintain control of the equipment covered by this Contract, with full preoperative determining if/when the Contractor shall be called to perform work. Agency representatives will make all decisions as to whether the Agency maintenance department or the Contractor will perform a repair.

The Contractor shall install parts at the appropriate awarded hourly labor rate.

The absence of detailed specification or omission of detailed description does not limit the quality of service rendered and shall be recognized as meaning that only the best commercial practices are to prevail, and that only first quality materials and workmanship are to be used and will be acceptable. Work shall comply with all industry standards and guidelines.

All services must be performed in accordance with the Contract or as detailed in the specifications. Services shall comply with all industry standards and guidelines.

## **I. General Information**

- A. Site visits are strongly encouraged. The Contractor is recommended to visit each site and become familiar with the equipment, its present condition, and its mode of operation, obtaining information concerning all aspects of what the job entails.
  - a. Site inspections may be arranged by contacting:  

Jesse C. Johnson, Facility Manager 3  
Cell: (901) 229-3791
  - b. Site visits shall be at the following location:  

11437 Milton Wilson Rd  
Arlington, TN 38002
- B. The Agency is not responsible for any errors and/or omissions in Contract's bid pricing.
- C. All services shall be coordinated with Agency representatives and scheduled at a mutually agreed upon time.
- D. No work shall commence without prior approval from authorized Agency representatives. Agency Contact: Jesse C. Johnson, Facility Manager 3 (901) 229-3791.
- E. The Contractor shall sign in and sign out with Agency representatives when arriving and leaving Agency facilities or grounds.
- F. An estimate of cost shall be required for work other than Contract specified, unless otherwise authorized by Agency representatives.
  - 1. The Agency may accept a verbal field estimate or may request a written estimate be submitted.
  - 2. Estimates must be itemized according to the lines of the Contract.
  - 3. A parts list and parts cost will be included in an estimate, when applicable.

4. The time involved in providing an estimate will be charged at the regular, holiday, or emergency time rate and the estimate time will be charged separately.
  5. Repair cost cannot exceed the amount estimated without justification from the Contractor and approval from authorized Agency representatives.
  6. Job estimates will be monitored by Agency representatives for accuracy.
- G. The Contractor shall perform the services as described, at the intervals as specified each Contract year.
1. The "Contract year" is a twelve (12) month period that begins on the effective date of the Contract.
- H. All services and repair must be performed in accordance with the equipment manufacturer's recommended procedures or as detailed in contract specifications.
1. If available, copies of equipment maintenance manuals will be provided to the Contractor if requested.

## **II. General Service Information**

- A. Contract Specified Service ("Planned Maintenance") – inspections, testing, preventive maintenance.
1. Contract Specified Service shall be provided at the frequency and during the time period(s) specified for each service.
  2. Service shall be provided in accordance with Contract specifications.
  3. Contract Specified Service shall be 100% fulfillment of the specifications listed on 100% of the equipment listed for that service, per each scheduled occurrence.
- B. Emergency Service
1. The Contractor shall provide unlimited emergency calls.
  2. Emergency services will be utilized when the equipment/system(s) under Contract ceases to operate as it is designed to, causing facility operating hazards, or endangerment to life or property.
    - a. Authorized Agency representatives will make the determination whether a requested service is an emergency.
  3. Emergency service work shall be billed according to the established hourly rate schedule that applies.
- C. Repair Service ("Non-Emergency")
1. Upon request by the Agency for Non-Emergency repair, the Agency will notify the Contractor, requesting dispatch of a repair technician, or personnel to provide an estimate of cost.

2. The Contractor shall dispatch appropriate personnel to perform the repair or provide an estimate as requested.
3. The Agency will pay for one (1) technician to perform the service requested unless otherwise agreed upon.
4. Once work has commenced on a job, it shall continue uninterrupted during regular business hours, until the job is completed satisfactorily, unless otherwise agreed upon by Agency representatives.
5. Generally, work will be scheduled during regular business hours; however, it may be necessary to change the work schedule to accommodate conditions at the Agency. If this is necessary, the Agency will arrange an agreeable work schedule with the Contractor.

## **II. Response Time**

- A. On-site service response time shall be defined as a service technician who can perform the service requested, on-site at the Agency location, within the time frame specified.
- B. Emergency service response – (Emergency status is determined by the Agency): No more than two (2) hours from notification to the contractor by the Agency, twenty-four (24) hours a day, seven (7) days a week, regardless of weekends, and legal State holidays.
- C. Non-emergency service response - No more than twenty-four (24) hours from notification to the Contractor by the Agency, excluding weekends and legal State holidays.

## **III. Checklist and Work Report**

- A. A printed Checklist must be completed and left with authorized Agency representatives at the time service is completed. The following information will be included in the checklist:
  1. All findings which concern the condition of, or operation of the equipment.
  2. Any recommendation for repair or additional service.
- B. A Work Report and a Checklist must be submitted when an annual inspection is conducted. The Work Report must be itemized and contain the following information:
  1. Description of work performed.
  2. Labor hours (time in/time out).
  3. List of parts used, when applicable.
- C. The work report must reference the purchase order number assigned to the service provided.
- D. The Agency will provide a checklist form that must be completed by the Contractor service technician, at the time service is rendered.
- E. When requested, the Contractor shall provide prior to use, a Material Safety Data Sheet (“MSDS”) for any supplies, materials, and/or substances used in the performance of work done at Agency facilities or on Agency grounds, for which a MSDS is required.

#### **IV. Contractor Requirements**

- A. The Contractor shall have trained personnel, taught to work on the equipment/system(s) as described or as listed, and perform the services as requested.
  - 1. Training: Technicians must be industry trained to work on the equipment as described and/or listed.
  - 2. At the State's request, the Contractor may be required to provide evidence of training.
  - 3. All work shall be performed by trained personnel.
- B. The Contractor shall have sufficient personnel to provide uninterrupted service.
- C. The Contractor shall have personnel to evaluate jobs and submit estimates of cost.
- D. The Contractor shall have employees to receive and act on service calls twenty-four (24) hours a day, seven (7) days a week, including holidays. An automated answering system will not be acceptable as contact.
- E. The Contractor shall hold all current licenses and/or permits, if required to perform the tasks under Contract.
  - 1. At the State's request, the Contractor may be required to furnish copies of licenses and/or permits.
- F. The Contractor shall have access to, and bring all equipment, materials, supplies, and tools necessary to meet the responsibilities of the Contract.
- G. The Contractor shall have a supply of stock replacement parts available for immediate use.
- H. The Contractor shall have access to non-stock replacement parts.

#### **V. Site Clean-Up**

- A. The Contractor shall clean the work area of all waste or debris generated by the Contractor during the performance of a service call, leaving the work site clean at the end of each workday.
- B. Waste or debris generated by the Contractor shall be removed from the work site and disposed of properly in accordance with federal, state and local laws and regulations, by the Contractor.
- C. The Contractor shall clean work sites of any unsafe materials and/or debris, and remove or secure all tools, when the Contractor leaves a work area unattended.

#### **VI. Parts Requirement and Part Cost**

- A. Generator replacement and repair parts must be manufacturer parts according to the generator brand.
- B. All parts, materials, supplies and equipment will be billed at Contractor's cost, minus any applicable sales or use tax pursuant to Tennessee Code Annotated, Section § 67-6-209, plus fifteen percent (+15%). Reference Standard Term & Condition titled "Taxes". The Contractor shall submit as backup documentation a copy of the original purchase invoice(s) as proof of cost for parts, materials, supplies, and equipment. This backup documentation must accompany the invoice in order for the Agency to process payment. If the Contractor cannot produce a copy of the original purchase invoice as proof of

cost, the Agency may verify current market value and if necessary, adjust the invoice to reflect fair market price.

- C. Discounts, including prompt payment discount offered by suppliers, must be credited to the Agency in determining the actual cost of the parts, materials, supplies and equipment used for this Contract.
- D. All parts, materials, and supplies used in the performance of contract work must be new.

## **VII. Charge Schedule**

- A. Legal State holidays are defined as official holidays approved by the Governor of Tennessee
- B. Charge rates will be inclusive of all expenses, including personnel, labor, travel cost, vehicle, fuel, trip charge, equipment, overnight accommodations or overnight associated expenses. No additional costs will be levied.
- C. Hourly Rate Charge
  - 1. Regular time rate applies to service provided during regular business hours as specified:
    - a. Regular Business Hours Monday through Friday 8:00am – 5:00 pm. CST
    - b. Excluding legal State holidays
  - 2. Premium time rate applies to service provided outside of regular business hours and legal State holidays.
    - a. Authorized Agency representatives must approve of a premium time rate prior to work being performed.
- D. Contract Specified Service (“Planned Maintenance”) Charge.
  - 1. Contract specified service charge will be all inclusive and bid as a unit price.
  - 2. Contract specified service charge will include, but is not limited to; Incidental preventative maintenance parts, materials, and supplies necessary to perform the tasks described and will also include oil, oil filters, fuel filter elements, fuel additives, antifreeze, breather pads, radiator caps, dry air cleaner element (air filter), distilled water, rust inhibitor, etc.
  - 3. Contract specified service work performed before or after regular business hours shall not incur additional charges.
  - 4. Multiple or return trips necessary to complete a Contract specified service will have no additional charge.

## **VIII. Time Verification**

- A. The Contractor shall require service technicians to log-in and log-out actual time worked with an authorized Agency representative, for all on-site service provided.
- B. The Contractor shall require service technicians to sign out and sign in for a lunch period if/when taken during a workday.

- C. The Contractor shall require service technicians to sign out if/when the service technician leaves the Agency premises for any reason and sign-in upon return to the Agency premises.
- D. The Agency will pay the hourly rate for actual time worked only.
- E. Time verification is required for hourly rate payment.

**IX. Invoice Requirements**

- A. The invoice for payment must be submitted to the Agency's financial services department:  
  
Department of Disability and Aging  
  
500 James Robertson Pkwy  
  
Davy Crockett Tower, 2<sup>nd</sup> Floor  
  
Nashville, TN 37243-1403
- B. The invoice for payment shall reference the work order number and the purchase order number assigned to the requested service/job.
- C. The invoice for payment must describe the work performed and be itemized as per the Contract.
- D. A copy of the original invoice(s) incurred with the procurement of chargeable parts, materials, and supplies must be provided as documentation for proof of cost.
  - 1. Parts invoices must accompany the invoice for payment.
  - 2. Parts reimbursement shall be made to the contractor only. Payment shall not be made by the agency to the Contractor's suppliers.

**X. Warranty Period/Coverage**

- A. Services requiring the Contractor to return to the job site due to equipment/system(s) failure with reference to services previously provided by the Contractor will be at no charge to the Agency.
- B. The Contractor shall absorb all cost incurred for replacement, repair, or corrections made to Agency equipment/system(s) due to:
  - 1. Faulty equipment or parts under warranty that were installed by the Contractor.
  - 2. Equipment/system(s) failure due to the Contractor's poor workmanship.
- C. The Agency shall be given manufacturer warranty agreements for equipment, parts, and materials used by the Contractor on the equipment/system(s) under Contract, when applicable.
- D. The Contractor shall warranty parts and labor one (1) year against defects.

**XI. Maintenance Schedule**

- A. Contract specified service Planned Maintenance.

- B. Contract specified service inspection and preventive maintenance service shall be as per specifications on equipment as stated (see sections XII, XIII, XIV and XV).
- C. Equipment includes all generators as listed on the agency equipment list.
- D. Contract specified service shall include incidental preventative maintenance parts, materials, and supplies as described in sections XII, XIII, XIV and XV.
- E. Contract specified service shall be performed as follows:
  - 1. Annual – When notified by Agency representative.
  - 2. Quarterly – When notified by Agency representative.

## **XII. Annual Maintenance Specifications**

- A. Fuel System:
  - 1. Change fuel filter elements.
  - 2. Pump off water and sediment from main fuel tank.
  - 3. Check fuel pressure at cylinder head (if applicable).
  - 4. Check fuel level in main fuel tank.
  - 5. Drain water and sediment from day tank.
  - 6. Check operation of day tank.
  - 7. Add sufficient fuel additives to inhibit bacterial growth and absorb condensed water in main fuel tank.
  - 8. Conduct a general inspection of all components of the fuel system.
- B. Lubrication System:
  - 1. Change oil in engine.
  - 2. Change oil filters.
  - 3. Check and record engine oil pressure.
  - 4. Check engine for oil leaks.
  - 5. Leave agency make-up oil (one (1) quart per engine Gas Genset, one (1) Gallon per engine, Diesel Genset).
- C. Cooling System:
  - 1. Check engine water pump.
  - 2. Check all cooling system hoses.

3. Check and clean all louvers.
4. Clean external core of radiator.
5. Flush and clean internal radiator.
  - i. Refill with proper water/antifreeze ratio.
6. Check condition of radiator cap, replace as needed.
7. Check and record freeze protection.
8. Add rust inhibitor to cooling system.
9. Check condition of belts, replace as needed.
10. Check for adequate fresh air to engine.
11. Check condition of fan hub.
12. Check operation of water jacket heater.
13. Check and record operating temperature verify that the operating temperature is in the correct range.

D. Exhaust System:

1. Check condition of mufflers, exhaust lines, supports and all connections.
2. Check condition of turbocharger (if applicable).
3. Check for exhaust leaks.

E. Air Intake System:

1. Check air inlet restriction.
2. Check air box pressure (if applicable).
3. Check crankcase pressure (if applicable).
4. Check exhaust restrictions.
5. Replace crankcase breather pads (if applicable).
6. Clean blower screen (if applicable).
7. Check all air system piping.
8. Replace dry type air cleaner element(s), or service oil bath.

F. Control System:

1. Check operation of all gauges and meters.
2. Clean control cabinet.
3. Check operation of all controls.
4. Check shut-down system for correct operation.

G. Engine Electrical Starting System:

1. Check installation dates of batteries, if past two (2) years, notify Agency representative.
2. Clean batteries and cables.
3. Test electrolyte and add distilled water to maintain proper electrolyte level, as required.
4. Check operation of float charger.
5. Check battery voltage (Test with conductance meter, include print out of results or picture of screen).
6. Lubricate starter motor, if necessary.

H. Generator:

1. Blow out with low pressure air.
2. Check condition of bearings.
3. Check main breaker for operation (if applicable).
4. Check cables from generator to transfer switch.
5. Inspect transfer switch for proper condition and operation.
6. Clean interior of transfer switch enclosure, as necessary.

I. General:

1. Check for unusual conditions for vibration, deterioration, leakage, high surface temperature or noise.
2. Run cool generator by shutting down main breaker in building. Load transfer to be made in less than ten (10) seconds. Run time to transfer during operational test. If this method is not possible, run generator under test conditions.
  - i. Important note: Notify the Agency representative prior to shutting down the main breaker.
3. Leave control panel in automatic mode.
4. Record all readings and present to Agency representative.
5. Notify Agency representative of additional service work that is required but not specifically

covered by these annual maintenance specifications.

### **XIII. Quarterly Maintenance Specifications**

#### **A. Fuel System:**

1. Drain water and sediment from fuel filters.
2. Check fuel pressure at cylinder head (if applicable).
3. Check fuel level in day tank.
4. Perform general inspection on all components.

#### **B. Lubricating System:**

1. Check oil level and fill to proper level when necessary.
2. Check and record engine oil pressure.
3. Check engine for oil leaks.

#### **C. Cooling System:**

1. Check all cooling system hoses.
2. Check coolant level and add antifreeze when needed.
3. Check freeze protection and add antifreeze when needed.
4. Check condition of belts.
5. Check operation of water jacket.
6. Check for adequate fresh air to engine.

#### **D. Exhaust System:**

1. Check condition of exhaust system.
2. Check for exhaust leaks.

#### **E. Air Intake System:**

1. Check air inlet piping.
2. Check condition of air filter element (or oil bath).

#### **F. Control System:**

1. Check operation of all gauges and meters.
2. Check operation of all controls.

G. Engine Electrical Starting System:

1. Clean batteries and cables.
2. Add distilled water to maintain proper electrolyte level, as required.
3. Check operation of float charger.
4. Check and record battery voltage.

H. Generator:

1. Check main circuit breaker for operation (if applicable).
2. Visually check transfer switch for proper condition and operation.

I. General:

1. Check for any unusual conditions or vibration, deterioration, leakage, high surface temperature, or noise.
2. Run cool generator by shutting down main breaker in building. Load transfer to be made in less than ten (10) seconds. If this method is not possible, run generator under test conditions.
  - i. Important Note: Notify the Agency representative prior to shutting down the main breaker.
3. Leave control panel in automatic mode.
4. Record all readings and present to Agency representative.
5. Notify Agency's Facilities Manager or Supervisor of additional service work that is required but not specifically covered by these quarterly maintenance specifications.

**XIV. Load Bank Testing of all Emergency Generators**

- A. All diesel-powered generators shall be exercised as required by at Agency facilities within National Fire Protection Association ("NFPA") 110 procedures for supplemental loads as follows:
1. 25% of nameplate rating for thirty (30) minutes, followed by
  2. 50% of nameplate for thirty (30) minutes followed by
  3. 75% of nameplate for sixty (60) minutes
  4. For a total of two (2) continuous hours
- B. All-Natural Gas and/or Propane Powered Generators shall be tested for the duration of at least four (4) hours, as required by the facility.
- C. The load should be with the load running at the time of the test. The test shall be initiated by opening all switches or breakers supplying normal power being used.
- D. Time Delays:

1. Load tests of generators shall include complete cold start.
2. Time Delays should be as follows:
  - i. On start: One (1) second minimum
  - ii. Transfer to emergency: No minimum
  - iii. Return to normal: Five (5) minutes
  - iv. Shutdown: Five (5) minutes minimum

**VIII. GENERATOR INFORMATION**

**West Tennessee Community Homes**

**Note: The (12) below listed generators are water cooled and fuel supply is natural gas.**

ADDRESS	MANUFACTURER	MODEL #	SERIAL #
5982 Polk St. Arlington, TN 38002	Generac	QT05554AVSNA	5071380
230 Oak Hill Lane Arlington, TN 38002	Generac	QT05554AVSNA	5071382
95 Oak Hollow CV Arlington, TN 38002	Generac	QT05554AVSNA	5071381
2960 Schaeffer Drive Eads, TN 38028	Generac	QT05554AVSNA	5708911
7405 Osborntown Rd Arlington, TN 38002	Generac	QT05554AVSNA	5708909
10926 Lubov Rd Arlington, TN 38002	Generac	QT05554AVSNA	5708910
11003 Hwy 70 Arlington, TN 38002	Generac	QT05554AVSNA	5899511
11005 Hwy 70 Arlington, TN 38002	Generac	QT05554AVSNA	5899510
11443 Arlington Woods Cv Arlington, TN 38002	Kohler	60REZG	2300127
11444 Arlington Woods Cv Arlington, TN 38002	Kohler	60REZG	2300142
11455 Arlington Woods Cv Arlington, TN 38002	Kohler	60REZG	2300143
11456 Arlington Woods Cv Arlington, TN 38002	Kohler	60REZG	2300126

**West Tennessee Regional Office**

**Note: The below listed generators are water cooled and fuel supply is diesel.**

<b>ADDRESS</b>	<b>MANUFACTURER</b>	<b>MODEL #</b>	<b>SERIAL #</b>
11437 Milton Wilson Rd Arlington, TN 38002 (Baker Complex)	McGraw-Edison Onan Genset 750	750.0DFZ- 4XR/25229D	D830658145

<b>ADDRESS</b>	<b>MANUFACTURER</b>	<b>MODEL #</b>	<b>SERIAL #</b>
11437 Milton Wilson Rd Arlington, TN 38002 (Maintenance Shop)	Elliott	FCA 12-6-24110	D830658145