

**STATEMENT OF WORK  
CRITICAL POWER SYSTEM SERVICES  
AT VARIOUS LOCATIONS WORLDWIDE**

**1.0 Introduction**

1. The Navy, like many organizations, operates facilities which require reliable electric power. Power is usually supplied by commercial utilities and government self-generation. Backup power is supplied by engine generators and by battery-based uninterruptible power supplies (UPSs). These engine generators and UPSs are generally three-phase units and range in size from a few tens of kilowatts (kW) to several megawatts (MW). Power systems include distribution from the source to the end user. Critical utilities may include air-conditioning, ventilation and heating. Critical utilities and equipment may require mechanical equipment to maintain equipment and utility systems within specified temperature ranges, humidity and ventilation.

1.2 The Navy's mission requirements are frequently changing, so new facilities and equipment must be acquired and installed, or existing facilities and equipment must be upgraded. Even where the mission stays the same, existing facilities and equipment require periodic maintenance and replacement. The Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC) is responsible for assisting Navy and other U.S. Government agencies worldwide.

**2.0 Scope**

2.1 This procurement is for an Indefinite Delivery, Indefinite Quantity (IDIQ) contract for equipment purchase, installation, renovation, alterations and repair of critical power systems, loads, and supporting facilities at various locations in CONUS and worldwide.

2.2 The services include but are not limited to planning, operations training, design, inspection, installation, repair, and upgrade, renovation, project management, scheduling, fabrication and installation of project components, distribution systems, and supporting structures and equipment, project logistical support, quality control, preparing project technical reports, as-built drawings, required permit documentation, and progress reports.

2.3 Equipment and facilities to be worked on include but are not limited to diesel engines, fuel tanks, electrical generators, uninterruptible power supplies, battery systems, distribution systems, cabling, computer room air conditioning (CRAC), ventilation, critical power control systems, and critical power protective equipment. Tasks could include low-voltage systems and detection. Power systems include low voltage (under 600 volts), medium voltage (typically 15 kV class), and may include higher voltage (above 35 kV). Redundant feeds from utilities, redundant UPS systems, power distribution units (PDUs), frequency conversion may be specified.

2.4 Projects are awarded by individual task orders. When practical, the projects will be scoped (site walk) by the contractor/government team. The main requirements of the project may be jointly scoped by the contractor and government team to develop a mutually agreed upon statement of work.

2.5 The contract will be awarded for a base period of one year with two (2) one year option periods, which are not guaranteed. The total maximum value for the base period and all options (the aggregate total of all IDIQ task orders awarded) resulting from this RFP shall not exceed \$45,000,000.00. The minimum guarantee is \$25,000 and applies to the base year only.

**3.0 Detailed Requirements**

3.1 General: The contractor shall furnish the required support at the times and places designated by the Contracting Officer. Such services will be furnished by the contractor in accordance with the individual statement of work prepared for each task order. The contractor may be required to respond to a site walk

request with as little as 24 hours advance notice. Performance shall not commence until the issuance of a task order authorized by the Contracting Officer.

3.2 Contractor requirements: The contractor shall provide all design, labor, equipment, materials and facilities as required performing the work as described in the individual task orders. Expected requirements of this contract shall include, but not be limited to, the following typical project requirements.

3.2.1 Services include procurement, installation, renovation, alterations, and repair for supporting facilities for the purpose of installing critical power systems. Work may include as-built drawing preparation, removal, and disposal.

3.2.2 Contractor shall be responsible for gathering data, identifying significant issues, developing appropriate inspection methods, identifying required retrofits, and preparing procedures for the installation, modification or upgrade of complex critical power systems and supporting facilities.

3.2.3 Preparation of schedules, timelines, and submittal registers.

3.2.4 Preparation of maintenance plans and development of shop and as-built drawings.

3.2.6 Execution of repairs, upgrades, retrofits, installation, and modifications to critical power systems, critical loads, and other supporting facilities, structures, and utilities.

3.2.7 Quality assurance of critical power systems, critical loads, supporting facilities and structures, documentation, processes, and procedures.

3.3 Contractor-furnished equipment: The main part of each task will be critical power systems. These systems will include but are not limited to one or more of the following items.

3.3.1 Engine Generators: Diesel (or natural gas to a lesser extent) engine-generator sets are expected. Turbine engine-generators may be specified or accepted on a case-by-case basis. Engines will be of modern design, conforming to current applicable safety, efficiency, and emissions regulations. Generators will usually be specified as three-phase. Commercially-available engine-generator sets produced as a package are usually preferred. Units will include interfaces for remote-controlled starting, shutdown, and voltage adjustment. Generator sets will be sized appropriately, and be able to operate properly with UPS or other loads existing or planned. Equipment installation in extreme temperature ranges is expected (extreme Arctic cold to hot desert environments).

3.3.2 Automatic Transfer Switch (ATS) will generally be specified along with engine-generator sets. ATS provided will be of modern design. ATS will be field-programmable, that is the ATS will include a user interface for facilities personnel to monitor and adjust essential functions. Remote monitoring and control may also be specified in the task order.

3.3.3 Uninterruptible Power Supply (UPS) consisting of a solid-state rectifier, battery, and inverter are the technology expected. UPS units to be procured in this contract will be, unless otherwise specified, three-phase and on-line fulltime. Dual-Redundant UPS units may be specified in any task order. UPS units will generally include internal, automatic bypass switches and external, maintenance bypass switches. The exact configuration will be specified in each task order. Batteries will generally be included with the UPS. The size and configuration of batteries will be specified in each task order. Typically, batteries will be of the sealed, lead-acid type. Battery installations will include racks, cabling, disconnect switches, and safety devices. Battery monitoring systems may be specified. Replacement of existing batteries is expected.

3.3.4 Remote monitoring and control of generator, ATS, and UPS may be specified in each task order. Interface to existing monitoring and control systems may be specified. Energy monitoring, Supervisory Control and Data Acquisition (SCADA) systems, automated building control systems are expected under this contract.

3.3.5 Cables and transmission lines: Underground or overhead. Typically 15 kV class, but may be higher or lower voltage. Underground cable is generally shielded, with ground. Cables may be required to be installed in existing conduit, duct banks or by direct burial. Removal of existing cable may be required. Existing cable is in some cases lead sheathed. Overhead cable may be installed on existing poles. Some tasks may involve providing and installing new poles.

3.3.6 Transformers: Transformers of all specifications and types may be specified as oil cooled or dry type. Transformer voltages include distribution, typically 15 kV to 480 or 208 V, three phase, and low voltage, typically 480 V to 208/120 V. Higher voltages to 35 kV may be required as specified in individual task orders.

3.3.7 Switchgear: Includes switches, fuses, reclosers, and other equipment associated with medium voltage distribution, and motor control centers, distribution panels, and other equipment associated with low voltage service.

3.3.8 Task orders may include computer room air conditioners (CRAC) and liquid cooled computer-equipment racks.

3.3.9 Grounding systems: Includes but is not limited to special grounds for lightning protection, EMP protection, equipment protection, life safety.

#### **4.0 Special Considerations**

4.1 Projects defined in individual task orders may require accelerated schedules to meet strategic fleet support objectives. As such, the contractor shall complete all tasks outlined in the task order within specified timeframes.

4.2 Contractors may require access to information or material which is classified up to the SECRET level per the Department of Defense Manual number 3020.45-M Volume 3 Subject: Defense Critical Infrastructure Program (DCIP) Security Classification Manual (SCM) of February 15, 2011. Those contractors will require a valid SECRET security clearance. Contractors may require access to Sensitive Compartmented Information Facilities (SCIF) to inspect, repair, install, or test critical power systems (The contractor shall provide personnel who meet security requirements as needed). Prime contractor personnel will be U.S. citizens. All contractor employees and sub-contractors working on project sites may be required to be US citizens in good standing with clean records. Many locations require all employees working on-site to pass a background investigation (Check of National Law Enforcement data bases, interviews, etc.) before being granted site access. Per SECNAV M-5510.36, SECNAV M-5510.30 and DoD 5220.22-M additional guidance will be provided by the NAVFAC ESC SMO.

4.3 Logistics at some sites will be difficult-to-very challenging. Occasionally, the contractor may be asked to ship their tools and materials to Europe, Middle East or Far East.

#### **5.0 Place of Performance**

5.1 The place of performance including designated inspection and acceptance instructions of each task will be specified in individual task orders. The place may be any Navy or other Government installation worldwide. Best commercial practice shall apply to preparation and packaging of any supplies to be delivered. Mark all shipments in accordance with MIL-STD-129. Some probable OCONUS locations may include (but not limited to): Japan/Far East; Hawaii; Guam; Alaska; Europe; Middle East/Bahrain.

#### **6.0 Period of Performance**

5.2 The period of performance of each task will be specified in individual task orders. The contractor may be required to respond to a site walk request with as little as 24 hours advance notice. The contractor may be tasked to provide emergency repair services with as little as 48 hours advance notice.

## **7.0 Task Orders**

7.1 The contractor shall perform work as specifically authorized in individual task orders, which will be issued by the Contracting Officer. No other government, quasi-government or private individual is authorized in any way to issue or change materially the task orders.

## **8.0 Documentation**

8.1 All required technical information, reports, and data shall be delivered in accordance with the specifications included in the basic contract and in the individual task orders.

8.2 Documentation will typically consist of:

- Manufacturer's operation and maintenance manuals
- Operation and Maintenance manuals for system as installed
- As-Built Drawings Panel Box Labeling

## **9.0 Experience and Qualifications**

9.1 Contractor and subcontractor requirements:

9.1.1 The contractor shall provide sufficient and highly qualified personnel, facilities, and equipment, at time of award, to meet the requirements of this contract. A single prime contractor with complete in-house capability is preferred. Prime contractor personnel will be U.S. citizens.

9.1.2 Some work tasks will take place in foreign countries and U.S. territories, etc. Contractors need to have proven experience working in remote foreign country locations. Extreme environmental conditions (heat, cold, isolation, insects, animals, snow, fog, drought, sun, long hours of darkness, etc. are expected for specific tasks.

9.1.3 With particular focus on the qualifications of the project manager and engineers, all contractor and subcontractor personnel shall be experienced and fully qualified in the applicable fields of expertise per the tasking requested in each task order. For example, key contractor and subcontractor personnel assigned to engine-generator projects shall be experienced and knowledgeable in engine-generator installation, fuel system installation, electrical wiring requirements for the voltage and current being handled, and all environmental and safety regulations. And for example, if emergency power conditioning is the desired tasking, then only personnel with industry dictated levels of experience and knowledge in this field should be proposed and assigned as appropriate personnel for the task order.

9.1.4 All work shall conform to the latest applicable codes and standards of the appropriate governing body (i.e., federal, state, or local authority having jurisdiction) and of the appropriate standards setting organization (e.g., AEE, ASCE, ASME, ANSI, API, AWWA, EIA/TIA, IEEE, FAA, NEMA, NFPA, ISO, OSHA, etc). All assigned contractor and subcontractor personnel shall demonstrate familiarity with and ability to apply all industry accepted and applicable codes, specifications and standards, appropriate to their level of responsibility.

9.1.5 As necessary, all assigned personnel shall be fully qualified to work in hazardous locations, such as high pressure containing, high temperature, and high voltage equipment, confined spaces, etc., and shall demonstrate an understanding of the applicable safety rules. Subcontractors performing utility distribution pipeline work must be familiar with all applicable codes and specifications including ASME, API, state, and CFR instructions.

9.2 Key Personnel:

9.2.1 Key personnel positions shall be filled by contractor and subcontractor personnel with the following minimum qualifications and experience. Experience must be relevant to the type of work being requested in each particular tasking order. Exceptions must be approved by the Contracting Officer. The government identified the following positions as key personnel. The contractor may propose other key personnel as required.

- Project or Program Manager: An advanced graduate degree or registered professional engineer with ten years of relevant experience in electrical, mechanical, and utility systems. Secret clearance is required, higher clearance is desired.

- Senior Project Engineer: An advanced graduate degree or registered professional engineer with ten years of relevant experience in electrical, mechanical, and utility systems. Secret clearance is required, higher clearance is desired.

- Site Superintendent: Ten years relevant experience in a supervisory role in construction or installation of electrical, mechanical, and utility systems, on projects of the scope and size of those expected in this contract. Secret clearance is required, higher clearance is desired.