

**STATEMENT OF WORK
FOR
CONSTRUCTION SERVICES
*Installation of Residential Emergency Generators***

1.0 INTRODUCTION

- 1.1 The U.S. American Consulate requires ***Services for the installation of government provided emergency generators and auxiliary equipment at residences in Guayaquil, Ecuador.***
- 1.2 The installation of the ten (10) generators are located in the ***Urbanizacion Los Parques, Klm. 5.5 Via a la Costa, Urbanizacion Laguna Club klm. 12 Via a la Costa, Urbanizacion Portofino klm. 11.5 Via a la Costa and Urbanizacion Puerto Azul, Klm. 9 via a la Costa.*** All inspections shall be requested through the General Services Office or Contracting Officer Representative [COR].
- 1.3 Work shall be completed as expeditiously as possible. The structure shall be occupied during the execution of this contract. Contractor shall coordinate with Contracting Officer for work phasing and job sequencing with work commencing and completing in each apartment unit in a sequential manner. Contractor shall submit a phasing plan with construction/installation schedule for review and approval prior to commencement of work at the site.

Contractor may be allowed to overlap phases upon exhibition of sufficient capability to execute the project simultaneously at multiple apartment units with the approval of the Contracting Officer [CO].

2.0 GENERAL REQUIREMENTS

- 2.1 The Contractor shall provide quantity surveyors, construction personnel, equipment, materials, tools and supervision as needed to complete the services that meet the technical requirements in this Statement of Work [SOW]. It is expected that the Contractor shall partner closely with Consulate personnel.
- 2.2 The work shall be executed in a diligent manner in accordance with a negotiated firm fixed price and performance period. The period of performance for all Phases of the project shall be completed in **sixty days** from Contract Award.
- 2.3 Access to all residences shall be coordinated with the General Services Office (GSO) only.
- 2.4 The Contractor shall be required to prepare and submit reports, bill of materials, product literature, drawings, specifications, quality control schedules, safety plan and construction costs. These documents shall provide the necessary interfaces, coordination, and communication between the Consulate and Contractor for the delivery of a completed project.

3.0 GOVERNMENT MATERIAL (GM)

Pursuant to Contract Clause FAR 52-245-2, Government-Furnished Property (Short Form), the Government will furnish the following materials and equipment for the installation by the Contractor. The Government Material (GM) is stored at ***the GSO warehouse***. The contractor shall

move, uncrate, assemble, and install the GM. GM shall be uncrated and inspected by the contractor in the presence of the Contracting Officer's Representative (COR) to determine any damaged or missing parts. The contractor shall be responsible for damage or loss occurring after this inspection. The contractor shall notify the COR fourteen days in advance of the date the GM is needed. Any GM not incorporated in the work shall be returned to the Government and placed in storage at **the GSO Warehouse** as directed by the COR.

- 3.1 Contractor shall provide adequate quantities of materials in addition to the inventory of materials currently stored at the site to provide a complete the project as specified. Detailed List of Items provided at the site include: **See attached SDMO T11UIV DIESEL GENERATOR SET INFORMATION (Standard features).**

4.0 CONTRACT ADMINISTRATION

- 4.1 The Contractor shall not conduct any work that is beyond this Statement of Work and accompanying specifications unless directed in writing by the Contracting Officer [CO]. Any work done by the Contractor beyond this SOW and accompanying specifications without direction from the CO will be at the Contractor's own risk and at no cost to the Consulate.
- 4.2 The Contracting Officer shall provide a Notice to Proceed [NTP] to the Contractor. No work shall be initiated until the NTP is issued by the CO.
- 4.3 The Contracting Officer may designate more than one individual to serve as the Contracting Officer's Representative [COR]. The Contractor will be furnished evidence of COR appointments, including explicit authority delegated to each COR and their responsibilities.
- 4.4 The Consulate does not make representations or warranties of whatsoever kind or nature, either expressed or implied, as to the quality, level of completion, accuracy, extent of compliance with the standards, codes and requirements described or referred to in this SOW, or the extent of coordination between or among the documents provided to the Contractor. The contractor shall install all equipment according to National Electrical Code, the International Building Code and Local safety and building codes.
- 4.5 The Consulate's review, approval, or acceptance of, nor payment for the services required under this contract shall be construed to operate as a waiver of any rights under this contract or any cause of action against the Contractor arising out of the performance of this contract.
- 4.6 The Consulate has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Office of Overseas Buildings may perform quality assurance inspections [QAI] and tests during construction to confirm the work is installed according to the SOW.
- 4.7 The Contracting Officer has the authority to issue a temporary stop order during the execution of any particular phase of this SOW. This authority may be executed when the Consulate requires time for official functions, or is in possession of specific credible information indicating that the lives of Consulate personnel are immediately threatened and that the execution of the project will increase the Consulate's vulnerability. The Contractor shall promptly notify the CO that work has been stopped.
- 4.8 If any of the Contractor's services do not conform to the contract requirements, the COR may require the Contractor to perform the services again in conformity with the contract requirements. The Consulate may by contract or otherwise, perform the services and charge the Contractor any cost incurred by the Consulate that is directly related to the performance of such service or terminate the contract for default.

4.9 The Consulate has the right to terminate this contract of convenience at any time in whole, or from time to time, if the Contracting Officer determines it is in the interest of the Consulate.

5.0 RESPONSIBILITY OF THE CONTRACTOR

5.1 The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all construction and other services furnished under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in its construction and other services.

5.2 The Contractor shall identify a Project Site Manager who shall be responsible for the overall management of the project and shall represent the Contractor on the site during construction. The Project Site Manager shall be approved by the COR.

5.3 The Project Site Manager shall attend all project meetings, prepare Status Reports on the project and submit them to the COR. Status Reports shall contain meeting minutes, accomplishments, rising concerns and proposed solutions, any proposed changed orders, and any other pertinent information required to report the progress of performance.

5.4 All documentation produced for this project will become the ownership of the Consulate at the completion of this project.

5.5 The Contractor shall verify that all materials, equipment, and systems provide operational dependability. The Contractor assures the completed construction / equipment installation shall be easily maintained or replaced with readily available materials and services.

5.6 Any cost associated with services subcontracted by the Contractor shall be borne by and be the complete responsibility of the Contractor under the fixed price of this contract.

5.7 The Contractor is responsible for safety and shall comply with all local labor laws, regulations, customs and practices pertaining to labor, safety and similar matters. The Contractor shall promptly report all accidents resulting in lost time, disabling, or fatal injuries to the COR.

5.8 The Contractor shall be and remain liable to the Consulate in accordance with applicable law for all damages to the residences where the generators will be installed caused by the Contractor's negligent performance of any of the services furnished under this contract. The rights and remedies for the Consulate provided for under this contract are in addition to any other rights and remedies provided by law.

6.0 PRE-CONSTRUCTION REQUIREMENTS

6.1 The Contractor shall examine all the documents and visit the sites to fully inform themselves of all the conditions and limitations applied to the work and submit a firm fixed price cost proposal for all the work. No subsequent cost allowance will be made to the Contractor for neglect of the existing conditions.

6.2 Provide a statement that the Contractor's company and all personnel are experienced in installation of **emergency generators, fuel tanks and systems and automatic transfer switches** similar to type and scope required for the work.

6.3 The Contractor shall prepare and submit a Quality Control Schedule [QCS] and Project Safety Plan [PSP] to address the project sites. The QCS and PSP are intended to document the entire project from beginning to end.

- 6.4 Submit a copy of a Contractor's Installation Guarantee covering the work, labor and equipment for a period of ONE [1] year at no cost to the Consulate signed by the Contractor.
- 6.5 Submit a Bill of Materials [BOM], product literature, samples and standard specification submittals of all materials to be used in the project provided by the contractor. The BOM's shall list the equipment and materials in sufficient detail that a purchase order for the materials and equipment can be executed without further elaboration or specifications. These documents will be used by the Consulate to approve all equipment and materials.

7.0 CONSTRUCTION REQUIREMENTS

- 7.1 The installation of the generators shall not begin until approvals of the Pre-Construction Submittals are accepted by the COR.
- 7.2 The Contractor shall be responsible for all required materials not provided by the Consulate, equipment and personnel to manage, administer, and supervise the project. All workmanship shall be of good quality and performed in a skillful manner as determined by the COR.
- 7.3 All materials and equipment incorporated into the project shall be new unless noted otherwise. The Contractor shall transport and safeguard all materials and equipment required for construction.
- 7.4 Equipment and materials shall be carefully handled, properly stored, and adequately protected to prevent damage before and during installation, in accordance with the manufacturer's recommendations. Damaged or defective items shall be replaced. The contractor will be responsible for security of all materials and equipment.
- 7.5 Receipt Of Materials - Shipment of equipment, materials, and supplies shall be addressed to the Contractor - not the Consulate. The Contractor must be on hand to accept shipments; the Consulate will not accept shipments.
- 7.6 The Contractor will be provided with a storage and staging area as determined by the COR. The Contractor shall be responsible for restoring the area to its original condition at the completion of the work. The Contractor shall be responsible for repair of any damage incurred to buildings or pavement as a result of storage activities. The Contractor is responsible for obtaining any additional off compound storage areas as required.
- 7.7 The Contractor shall at all times keep the work area free from accumulation of waste materials. Upon completing construction, the Contractor shall remove all temporary facilities and leave the project site in a clean and orderly condition acceptable to the COR.
- 7.8 The Contractor shall perform the work at the site during the Consulate's normal workday hours, unless agreed upon with the COR.
- 7.9 The Contractor shall be responsible for connection of temporary utilities to existing utilities as required to ensure residences are not without power. All power interruption to residences shall be coordinated with the GSO office and not last more than one hour a day. All temporary connections to power lines shall be coordinated with the COR. The Contractor shall pay all costs incurred in connecting, converting, and transferring the utilities to the work. The Contractor shall be responsible for making connections, including providing transformers, and for disconnections when required..
- 7.10 At the end of each work day, or notification of a temporary stop order, the Contractor shall lower and fixed all temporary work platforms and/or harnesses. Contractor shall notify the COR of the temporary barricade locations. Beginning the next workday, the contractor shall remove the temporary barricades before continuing the project.

- 7.11 Storm Protection - Should warnings of wind of gale force or stronger be issued, the Contractor shall take every practicable precaution to minimize danger to person, the work and adjacent property. Precautions shall include, but not be limited to, closing all openings, removing all loose materials, tools and equipment from exposed locations, and other temporary work.
- 7.12 Cleanup - The Contractor shall keep the work areas at all sites, including storage areas, free from accumulations of waste materials on a daily basis and comply with all federal, state and local regulations pertaining to the storage, transport and disposal of wastes. The Contractor shall not use residential or US Government Facility waste disposal facilities including garbage cans, trash piles or dumpsters.
- 7.13 Landscape Restoration - The surfaces of all unpaved areas disturbed by construction activities shall be sodded with an approved grass native to the sodded area as approved by the COR. These shall include areas which existing pavement is removed, areas where excavation takes place, and areas where existing sod is killed or compacted by construction activities. Landscape shrubs killed or damaged by construction activities shall be replaced with same species and size.

8.0 CRITERIA

- 8.1 The Contractor work shall in accordance with U.S. codes and standards. The COR will review and comment on the Contractor's submissions using the following codes and standards:
American Society for Testing & Materials,
2003 International Building Code
2003 International Mechanical Code
2002 National Electrical Code (NFPA)

Statement of Work for Construction Services and the following accompanying specifications:

National Electric Code, 2008 edition, (NEC) Sections 225.31-225.39, 702, 445 and all other applicable codes.

Additional Requirements and Information:

- Generator installations must comply with: applicable standards of the National Fire Protection Association (NFPA).
- Generators must be installed at least 5 feet away from any building openings (windows, doors etc.) and at least 5 feet away from any walls made of combustible materials [NFPA 37]
- Minimum access clearances from buildings and property lines must be provided on all sides of generators in accordance with the manufacturers' installation instructions. * NOTE: *Most manufacturers require at least 3feet of clearance; this may affect the location of generators on properties with narrow side yards.*
- Generators should be placed as close as possible to the building electric breaker box panels. The electric breaker panels must be permanently labeled indicating an alternate power source (generator) is connected to the electric system.
- Generators may not be placed within five feet of any septic system drain field or impede access to septic tank covers or cleanouts.

All generators shall be installed according to manufacturer's specifications. If concrete mounting pads are required, the pads must be suitable for the application with appropriate vibration eliminators. All concrete shall be smooth with a trowel finished.

- 8.2 **Technical considerations for the installation of SDMO emergency generators.**

The generators that need to be installed in the different residences are 11 KW three-phase 127/220 -120/208 volts capacity, brand SDMO T11U- NEXYS, which coils should be connected in mono-phase way because there is a single phase feeding in all the residences.

When the generator is connected in single phase way it loses 33% of its capacity, having left 7.37 KW for electric service in case of lack of electric supply.

As every residence has a demand that varies between 15 and 20 KW, it will be necessary to discriminate of some charge and only consider the charge that has priority like the lights, water pump, kitchen, freezer, outlets over kitchen table, microwave oven and range/stove.

In order to make the charge discrimination it is necessary to install an additional breaker panel that will collect the desired charge that will work with the local power supply and with the emergency generator, which means that those circuits will always have electric energy.

Because the generator has its own governor to make it start automatically, shut down and regulate itself, it is also necessary to install an automatic transfer panel that will give the signal to the generator for turning on or off when there is or is not electric energy in the local network.

Attached is a study of the charge demand that should be served by the emergency generator.

STUDY OF THE DEMAND

VILLAGE TYPE	MAXIMUM DEMAND CALCULATION			MONTHLY ENERGY CALCULATION KWH		
DESCRIPTION	QUANTITY	W/PTO.	W TOTAL	HOURS/DAY	F.C.	W-H
Lights	20	100	2000	6.00	0.50	6000
General use outlets	14	150	2100	4.00	0.35	2940
Kitchen counter outlets	4	300	1200	3.00	0.50	1800
Refrigerators	2	600	1200	24.00	0.50	14400
Electrical range/stove	1	6000	6000	3.00	0.5	9000
Water pump	1	350	350	0.50	1.00	175
Microwave oven	1	1500	1500	0.50	0.20	150
		KW TOTAL installed	14.35	KWH/DAY	34.47	
				# day /month		30
		DEMAND Kw according Ebasco	7.14	KWH month		1033.95

* KW demand = Kwh/(49,9*Kwh exp 0,154)

THE CALCULATED DEMAND IS 7, 14 KW BECAUSE THE GENERATOR OF 11 KW THREE- PHASIC WHEN IS CONNECTED IN MONO-PHASIC TYPE THE CAPACITY IS REDUCED TO 7, 33 KW. IT WILL POSSE THE CAPACITY TO SUPPLY THAT ENERGY.

9.0 DELIVERABLE SCHEDULE

- 9.1 The Contractor shall commence work under this contract promptly, execute the work diligently, and achieve final completion and acceptance including final cleanup of the premises within the period specified.
- 9.2 Milestones:
- | | |
|---------------------------------------|-----------------------|
| Contractor Pre-Proposal Site Visit | March 22, 2011 |
| Award of Contract & Notice to Proceed | April 8, 2011 |
| Pre-Construction Submittals | March 31, 2011 |
| Quote Submission Deadline | March 31, 2011 |
| Construction Begins | Within 10 days of NTP |
| Construction | 60 days |
- 9.3 Project Completion: Furnish one copy of maintenance and operating information, Contractor's one year workmanship guarantee and product literature of all items installed.

10.0 PROJECT SECURITY

- 10.1 The work to be performed under this contract requires that the Contractor, its employees and sub-contractors submit corporate, financial and personnel information for review by the Consulate. Information submitted by the Contractor will not be disclosed beyond the Consulate.

10.2 The Contractor shall submit this information including construction vehicle requirements within 10 days of the Notice to Proceed.

11.0 PAYMENTS

11.1 The Contractor shall provide a fixed priced lump sum proposal to the Contracting Officer. The Contractor may submit requests for progress payments at monthly intervals to cover the value of labor and materials completed to date. In making progress payments, there shall be retained 10% of the amount due until final completion.

11.2 The Contractor shall submit one copy of all payment invoices, with the appropriate backup documents to the COR. The COR will determine if the invoice is complete and proper as submitted. The COR also will determine if billed services have been satisfactorily performed and if expenses billed are correct. If it is determined that the amount billed is incorrect, the COR will within seven days, request the Contractor to submit a revised invoice.

11.3 The Contractor shall specifically identify his last invoice "Final Invoice." The Final invoice shall include the remaining payment claimed to be due under the basic contract and all modifications issued, if any. The final invoice shall also have the Contractor's Release of Claims Certificate attached.

END OF STATEMENT OF WORK