

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE PAGE OF PAGES

2. AMENDMENT/MODIFICATION NO. M001		3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY American Embassy Kathmandu Maharajgunj, Braham Cottage, Narayan Gopal Sadak Kathmandu		CODE	7. ADMINISTERED BY (If other than Item 6) Same as # 6	CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(X)	9A. AMENDMENT OF SOLICITATION NO. 19NP4019Q3520
CODE			9B. DATED (SEE ITEM 11) 07-31-2019
FACILITY CODE		X	10A. MODIFICATION OF CONTRACT/ORDER NO.
			10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Section B

E. IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this modification is to change the complete SOW and solicitation submission date as follows:

The SOW reference to the Solicitation 19NP4019Q3520, Attachment -1 has been replaced by attached revised SOW for solar power system at phora updated on 08-23-2019. All the service and materials reference to the solicitation 19NP4019Q3520 will be in accordance with new SOW and other terms and conditions of the solicitation remain the same;

The solicitation submission date is changed from August 29, 2019 to September 06, 2019.

All other terms and conditions remain the same.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Scott McDow	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 08-23-2019

INSTRUCTIONS

Instructions for items other than those that are self-explanatory, are as follows:

- (a) Item 1 (Contract ID Code). Insert the contract type identification code that appears in the title block of the contract being modified.
- (b) Item 3 (Effective date).
- (1) For a solicitation amendment, change order, or administrative change, the effective date shall be the issue date of the amendment, change order, or administrative change.
 - (2) For a supplemental agreement, the effective date shall be the date agreed to by the contracting parties.
 - (3) For a modification issued as an initial or confirming notice of termination for the convenience of the Government, the effective date and the modification number of the confirming notice shall be the same as the effective date and modification number of the initial notice.
 - (4) For a modification converting a termination for default to a termination for the convenience of the Government, the effective date shall be the same as the effective date of the termination for default.
 - (5) For a modification confirming the contracting officer's determination of the amount due in settlement of a contract termination, the effective date shall be the same as the effective date of the initial decision.
- (c) Item 6 (Issued By). Insert the name and address of the issuing office. If applicable, insert the appropriate issuing office code in the code block.
- (d) Item 8 (Name and Address of Contractor). For modifications to a contract or order, enter the contractor's name, address, and code as shown in the original contract or order, unless changed by this or a previous modification.
- (e) Item 9 (Amendment of Solicitation No. - Dated), and 10 (Modification of Contract/Order No. - Dated). Check the appropriate box and in the corresponding blanks insert the number and date of the original solicitation, contract, or order.
- (f) Item 12 (Accounting and Appropriation Data). When appropriate, indicate the impact of the modification on each affected accounting classification by inserting one of the following entries.
- (1) Accounting classification
Net increase \$ _____
- (2) Accounting classification
Net decrease \$ _____
- NOTE: If there are changes to multiple accounting classifications that cannot be placed in block 12, insert an asterisk and the words "See continuation sheet".
- (g) Item 13. Check the appropriate box to indicate the type of modification. Insert in the corresponding blank the authority under which the modification is issued. Check whether or not contractor must sign this document. (See FAR 43.103.)
- (h) Item 14 (Description of Amendment/Modification).
- (1) Organize amendments or modifications under the appropriate Uniform Contract Format (UCF) section headings from the applicable solicitation or contract. The UCF table of contents, however, shall not be set forth in this document
 - (2) Indicate the impact of the modification on the overall total contract price by inserting one of the following entries:
 - (i) Total contract price increased by \$ _____
 - (ii) Total contract price decreased by \$ _____
 - (iii) Total contract price unchanged.
 - (3) State reason for modification.
 - (4) When removing, reinstating, or adding funds, identify the contract items and accounting classifications.
 - (5) When the SF 30 is used to reflect a determination by the contracting officer of the amount due in settlement of a contract terminated for the convenience of the Government, the entry in Item 14 of the modification may be limited to --
 - (i) A reference to the letter determination; and
 - (ii) A statement of the net amount determined to be due in settlement of the contract.
 - (6) Include subject matter or short title of solicitation/contract where feasible.
- (i) Item 16B. The contracting officer's signature is not required on solicitation amendments. The contracting officer's signature is normally affixed last on supplemental agreements.



FACILITY MANAGEMENT OFFICE

Revised SOW for solar power system at Phora updated on 08/23/2019:

DATE: July 2019

PROJECT: Design, supply, install, test & commission a Solar PV panel System at the Commissary Warehouse-Building Phora Compound.

LOCATION: U.S. Embassy, Kantipath, Kathmandu

- A. Objective:** U.S Embassy intends to get a design, supply, and an installation plan of a complete set of Solar PV panels with tie-grid Inverters from professional solar contractors to produce electrical energy and connect to our embassy grid system without battery bank. The produced electrical power from the estimated 48 Kw Solar PV panels with tie-grid inverter can directly supply power to our main bus of embassy, which has two electricity sources: diesel generator and normal municipal city line. Design, material, equipment, tools, and labor need to be provided by the awarded contractor and will include final testing & commissioning for total capacity of estimated 48 kW solar project. This is design build project.
- B. Project Description:** As a design build project, contractor will design, supply, install, test, & commission the mono crystalline Solar PV panel project including solar structures, tie-grid Inverter with cabling and conduiting works, on the commissary warehouse-building roof at the parapet wall of Phora compound. The total capacity of solar PV panel array will be 48kW DC, and they will be on the roof. The total area of parapet wall surfaces where solar PV panel array will be installed is 84 running meter and the roof area is 411 sq. meters. The capacity range of each solar PV panel will be 300-400 WP. The tie-grid inverter(s) must be string-type and be in parallel with a set of each segment for the PV arrays. The maximum estimated number of online tie-grid inverter required is 5 to 6 units

with the capacity range of 8 to 10 kW. The system output voltage from inverter should match with the embassy grid i.e. 400 V, 3 – Phase, 50 Hz.

- C. Scope of Work:** Contractors are requested to design, supply, install, test, commission, provide labor, and material for the complete solar PV panels with tie-grid inverter system.

The solar PV panel installation project scope will be split into two (2) basic phases, with the first being, Engineering and Construction Documentation Services and the second being Construction Services. The first phase will include developing construction documents capturing the installation intent and construction phases, which shall include site plans and relevant engineering calculations. This construction services work will include the installation of solar PV panels and tie-grid inverters.

1. Phase 1: Engineering / Construction Documentation Services.
Contractor will provide the below Design and Calculations:
 - a. Drawings:
 - i. Demolition Works
 - ii. Architectural plans of roof and rooms affected by installation
 - iii. Structural Drawings
 1. Framing of solar PV panel system and Mounting Details
 2. Racking information and details
 3. Tie-down details (Connection between base structure and PV panel support)
 4. Base building roof structural plan
 - iv. Electrical Plans
 1. New work plans and details
 2. Equipment placing and clearances
 3. Power Riser Diagram
 4. Single Line Diagram
 5. Panelboard Details (schedule, connection, and protection)
 6. Feeder and conduit sizing
 - b. Structural Calculations prepared by certified licensed structural engineers including:
 - i. Wind load calculation (Based on 57 m/sec of ultimate design wind speed at 3 second gust)

- ii. Seismic load calculation (MCE_R spectral response accelerations: $S_5=1.9 g$, $S_1=0.9g$ for Kathmandu)
 - iii. Structural analysis and design of PV panel system
 - iv. Calculation of connection design
 - v. Evaluation of the base structure for the loads due to addition of PV panels on roof
- c. Detailed load calculation for designed PV array

Construction Documents initiation by the COR, the Contractor shall submit electronic copies and required hard copies of 100% Construction Documents to the COR. Post will review these Construction Documents and comments will be returned to the Contractor for incorporation. The Contractor shall respond to all review comments in writing in English. The Contractor shall provide written explanations where he/she does not agree with Post's comment. Post shall have one (1) week to review and comment on the 100% submission. The contractor shall have one (1) week to respond to all Post comments. The COR initiate the completion of the 100% CD Phase and transition to the Construction Services Phase.

2. Phase 2: Construction Services

The contractor will use crane or other services for collecting all the material to the roof of warehouse building. The contractor will install the solar PV system, tie-grid inverters, DC and AC cables, breakers, and connect to embassy panel as per the approved drawing from phase one.

As a reference, a template of bill of materials for phase two is as per below:

- a. Solar PV's capacity will be 300-400 WP each with a 21% minimum efficiency for total 48 kW DC capacity of the solar PV system. The solar PV will have IEC 61215, 61730 - 1 and IEC 61730 - 2.
- b. Structures sizes will be as per the approved dimensions from phase one
- c. Tie-grid Inverters shall be SMA brand and each have the range of 8 - 10Kw capacity for 48 Kw DC solar PV that can convert three-phase power output, have LCD Display, wide voltage operating range of 105-500V and LED Indicators, and should meet safety operating standards and code requirements of IEC 62109 and IEC 60068.
- d. Contractor must connect the system to SMA's Sunny Portal website. Contractor must provide an SMA Data Logger (SMA Cluster Controller or SMA Data Manager M) and establish data connections between all new inverters to the data logger, and between the data logger and a network connection either via DIN or GPRS modem.
- e. Data logger must be programmed to allow for zero export to the local energy grid.
- f. PV system must be designed to shut down in the event of a grid failure or the activation of on-site diesel generator systems.

- g. DC copper cables and metallic conduit of standard size are required for the entire system.
- h. Electrical conduits and fittings of GI as per the site condition.
- i. Necessary electrical switches, breakers, and protective items.
- j. Other necessary hardware items for overall installation work.
- k. Contractor will provide 5% of total number of solar PV panel and one inverter of same capacity and brand as spare parts after completion of the project.
- l. Training of the mission's technical staffs for the service, maintenance, and operation of software program for 4 to 6 hours in minimum.

A mandatory pre-bid walk-thru will be coordinated with bidders.

D. CONTENT OF PROPOSAL FROM CONTRACTORS

The proposal from contractors should contain at least the following documentation:

- i) Documentation of their Prior Experience of at least 5 years for supplying and installing of large-scale tie-grid solar PV panel systems.
- ii) Detail Bill of Quantities for phase one and phase two containing cost estimate with quantities for all the material used.
- iii) Type, brand, & technical specifications of major material to be used, at the very minimum it should contain documentation on:
 - Solar PV panels
 - Structures for solar PV panels
 - Tie – grid Inverters
 - DC cables
 - Energy Meters
 - Electrical switches and breakers
- iv) A single line diagram of the proposed solar PV panel system and detailed calculation with confirmation that the grid ties inverters will be supplying solar generated electricity irrespective that the source of electricity to that building is operating under (either city power or generator) and will ensure there is no synchronization problem/issue with these different sources of electricity.
- v) Work schedule – Outlining activities in order to show that the entire work is completed within estimated and approved time for both phase one and phase two.
- vi) Warranty and guarantee of major supplied equipment, and installation work.
- vii) Working Methodology.
- viii) Crane or other type of service equipment that can lift or bring the material on the roof of warehouse building

E. GENERAL SPECIFICATION OF WORKS:

The contractor shall furnish the design, materials, and labor to perform all the work as proposed under Section A, B, C, and D. The contractor shall be responsible for removal and disposal of all construction debris and for the restoration of site in a neat and presentable condition, at his own cost. The contractor will assign a full-time technical supervisor, who will be on the project site during the working hours. The supervisor must be capable of interpreting drawings and specifications. The contractor will be required to complete the work within the specified date, set by The Embassy. The contractor will be responsible to submit bi - weekly report, regarding the progress of the work. The contractor must get a written approval, from the Embassy designated Officer, regarding the quality of the materials provided, prior to its use, at site. The materials used in the installation must be according to the specifications outlined. The contractor must visit the site personally and prepare technical specifications and drawings for all the installation works that are included in the project. The contractor should supply technical labor in minimum of five persons. If work requires more than five persons then it should be multiple of five like 5, 10, or 15 persons in a day basis.

F. WARRANTY OF CONSTRUCTION

The warranty for the photovoltaic modules shall be a minimum of 90% output after 25 years, 10 years for tie – grid inverters, and 5 years on cable and its installation work from the date of final acceptance of the work. The contractor shall be responsible to correct any defects, which may occur within the period of warranty from the date of final acceptance of the work. The contractor shall bear all the cost to fix the repairing work during the warranty period.

G. MILESTONES

- a. A single line working drawing of the system with site dimensions and approval of technical details of all equipment/system must be approved prior to the contractor proceeding to the next phase of work.
- b. Contractor Work Phase Plan.
- c. Contractor design and material submittals for phase one and phase two.
- d. Technical man powers with CV.
- e. Catalogue and brochures for proposed solar PV panels, inverters and other materials.

H. QUALITY CONTROL

- a. The installation work should be properly bracketed with support.
- b. A field supervisor that has at least a minimal knowledge of English and technical skills related to work must be present at all times.

- c. COR will ensure the material is not damaged prior to and during installation, and that standard industry practices as defined by safety codes, are followed at all times.
- d. Proper joints of the cables/pipes with approved procedure are required.
- e. A final inspection will be held with the COR and the site supervisor to inspect for quality of all completed installation work.

I. SAFETY

- a. Facility Supervisor will ensure that all equipment used during the project is in safe operating condition.
- b. All personnel on the job site shall have the appropriate job safety equipment and Personal Protective Equipment (PPE). As per the attached drawing of the scope of work "**Description**", there should be safety belts, rope, helmet, proper ladder, & other necessary safety items that are maintained all the time during work at the site.
- c. Embassy reserves the right to stop the work if any unsafe contractor conditions are observed or encountered.
- d. All electrical equipment such as drills, saws, and electrical extension cords must be properly grounded and be free from any defect in the insulation cover
- e. All ladders will be in good condition and used in a proper manner.

J. SECURITY

- a. A list of all personnel working on the project along with Identification numbers must be submitted to the Embassy immediately after awarding the contract for vetting. The BI form as attached below needs to be filled with photo and submitted to the embassy with covering letter.



Biographic Form for
Temporary Workers.c

- b. While on the Embassy property, all personnel must always be escorted . Any personnel found unescorted will be removed from the project immediately.
- c. Job site personnel will be issued a visitor's badge by the Security staff and this badge must always be worn.