

## **Request For Quotaion (RFQ)**

(RFQ # AEPC/RERL-2018-4)

**Supply and Installation of Solar PV System at Health Facilities under Swachchhata Project in selected 2 Health facilities of Jajarkot and Dolpa district**

**Alternative Energy Promotion Center  
Renewable Energy for Rural Livelihood**  
Financing Agency: Renewable Energy for Rural Livelihood (RERL)

Date: 3 June 2018

### Information to the Contractor

S.	Subject	Details
1	The name of the Client	Renewable Energy for Rural Livelihood (RERL), Alternative Energy Promotion Center (AEPC) Khumaltar Height, Lalitpur Nepal
2	Method of selection	Cost-Based Selection (QCBS)
3	Name of the Task	Supply and Installation of Solar PV System at Health Facilities under Swachchhata Project in selected 2 Health facilities of Jajarkot and Dolpa district
4	The clauses on fraud and corruption in the contract	As per government and donor's rules and regulation
5	Clarifications may be requested	2 days before the submission date
6	Contact for Clarification	Email: <a href="mailto:rerl@aepec.gov.np">rerl@aepec.gov.np</a>
7	Language of RFQ	English
8	Validity of the RFQ	<b>120</b> days after the submission date, i.e. until: <b>16 October 2018</b>
9	Copies of required RFQ	One (1) Original
10	The RFQ submission address	Renewable Energy for Rural Livelihood (RERL), Alternative Energy Promotion Center (AEPC), Khumaltar Height, Lalitpur, Nepal, <u>3<sup>rd</sup> Floor in the AEPC building</u>
11	Information on the outer envelope	Supply and Installation of Solar PV System at Health Facilities under Swachchhata Project in selected 2 Health facilities of Jajarkot and Dolpa district
12	RFQ Issued Date	3- June-2018
13	Deadline to Submit RFQ	<b>18 June 2018, before 15:00Hours</b>
14	Award	Immediate after evaluation of submitted proposal
15	Quotation Clarification	N/A
16	The assignment is expected to commence	1-July- 2018
17	Other Information	Complete BoQ with Technical Specification and supporting documents shall be highlighted and submitted
18	Other Provision	As per prevalent Laws of Nepal

**Request For Quotaion (RFQ)**  
**of**  
**Supply and Installation of Solar PV System at Health Facilities under Swachchhata**  
**Project in selected 2 Health facilities of Jajarkot and Dolpa districts**

Date: 3 June 2018

**1. Objectives**

The objective of this RFQ is to:

- Supply and Installation of Solar PV System at Health Facilities under Swachchhata Project in selected 2 Health facilities of Jajarkot and Dolpa district

**2. Scope of Work**

The task intends to call interested contractors for supplying and installing Solar PV System at Health Facilities under Swachchhata Project in selected 2 Health facilities of Jajarkot and Dolpa district

The scope of this RFQ includes the completion of following, but shall not be limited, activities:

1. The contractor shall quote to supply and installation of the system as mentioned in this RFQ
2. The contractor shall provide detail specification of the system as proposed in this RFQ including the warranties.
3. The contractor shall meet all the requirement as mentioned in this RFQ
4. The contractor must provide training on operation and maintenance to the local representative from the school.
5. The contractor must highlight the description as in the Specification in the Technical Specification and other documents during submission of the RFQ.

**3. Information of Installation Sites**

**Dalli Primary Health Care Centre:**

Dalli PHCC is located in remote Nalgad rural municipality of Jajarkot district having latitude of 28° 47' 28" and longitude of 82° 18' 05". It is connected by 16 km seasonal road to district headquarter. 5,427 people of nearby villages gets medical services from this Health Facility (HF). In the year 2074, roughly 12,000 patients visited Dalli PHCC for different medical services. The HF comprises of 19 rooms, which includes a pathology lab and a birthing centre. Micro hydropower provides electricity supply to the HF, which is limited to 3 – 4 hours per day. The HF has many electrical equipment like autoclave, semi auto analyser, USG machine, Perilight, refrigerator, oxygen concentrator, ECG machine, photocopier and computers but due to lack of regular electricity supply these equipment are not operated to its potential. The contact person for this HF is Mr. Tapta Bahadur Chanra of Telephone no. 081-620400.

### **Majhpal Health Post:**

Majhpal health post is located in Thulibheri Municipality of remote Dolpa district having latitude of 28.939 and longitude of 82.81083. The HF is located 50 km away from Dunai, district headquarter and 38 km away from Jufal (location of airport). 1,328 people of nearby villages gets medical services from this HF. In the year 2074, roughly 1,300 patients visited Majhpal HF for different medical services. The HF comprises of 18 rooms, which includes a birthing centre. Micro hydropower provides electricity supply to the HF, which is limited to 3 – 4 hours per day. The HF have few electrical equipment and municipality has promised to provide sufficient budget to procure electrical medical equipment in next fiscal year once it has regular electricity supply. The contact person for this HF is Mr. Hari Bahadur Rokaya of Mobile no. 9748901927.

## **4. Technical Specification**

### **3.1 Solar PV**

<b>S.N.</b>	<b>Description</b>	<b>Specification</b>	<b>Contractor's Proposal</b>	<b>Contractor's Remark (Fully/Partially Complied)</b>
	Name of the Manufacturer			
	Brand/Model			
1	PV Module Type	Mono/Poly Crystalline or Thin Film		
2	National Certification	RETS		
3	International Certificate	IEC 61215 and IEC 61730 and IEC 61646 (If Thin Film)		
4	Module Efficiency	Crystalline: 15% Thin Film: 10%		
5	Peak Power Per Module	Minimum of 250 Watts		
6	Power Degradation	At least 10 years against a maximum 10% reduction and 20 years against a maximum 20% reduction of output power at STC.		
7	Specification	Attached Specification, Standards and Certificates with above requirement highlighted		

### **3.2 Energy Storage**

S.N.	Description	Specification	Contractor's Proposal	Contractor's Remark (Fully/Partially Complied)
	Name of the Manufacturer			
	Brand/Model			
1	Discharge	VRLA Gel Tubular Battery		
2	National Certification	RETS		
3	Battery C Rating	C10 Rating		
4	Battery Efficiency	Minimum of 85% A hrs		
5	Cycle at 25°C@80% DOD	Minimum 1500 Cycles		
6	Inedible Labels	Name and brand of the manufacturer. Model and type. Manufacturer serial number. Rated Capacity in Ampere Hours at the Discharge rate of C10 Nominal Voltage		
7	Specification	Attached Specification, Standards and Certificates with above requirement highlighted		

### 3.3 Charge Controller

S.N.	Description	Specification	Contractor's Proposal	Contractor's Remark (Fully/Partially Complied)
	Name of the Manufacturer			
	Brand/Model			
1	Type	Solar Charge Controller		
2	Control Mode	Maximum Power Point Tracking (MPPT)		
3	Display	LED/LCD		
4	Protection	Low Voltage Disconnect (LVD), Low Voltage Reconnect (LVR), High Voltage Disconnect (HVD), High Voltage Reconnect		

		(HVR), Reverse Current Leakage and Reverse Polarity Protection Level		
5	Maximum Quiescent current consumption at nominal voltage	150 mA		
6	Certification	RETS or UL		
	Labels	Name and brand of the manufacturer. Model and type. Maximum input current. Maximum load current. Nominal voltage. Size of the fuse in ampere. Type of battery used		
7	Specification	Attached Specification, Standards and Certificates with above requirement highlighted		

\*The in-built MPPT in inverter shall also comply

### 3.4 Inverter

S.N.	Description	Specification	Contractor's Proposal	Contractor's Remark (Fully/Partially Complied)
	Name of the Manufacturer			
	Brand/Model			
1	Type	Pure Sine Wave		
2	Surge Handling Capacity	>125% for 30 sec		
3	Minimum Efficiency	90%		
4	Power Factor	Between 0.8 lagging to 0.9 leading		
5	Certification	UL 1741 or IEC Equivalent		
6	AC Output	230±5% V @ 50 Hz		
7	Output Frequency	50 Hz±2.5%		
8	Protection	Reverse Polarity, AC short circuit and overload, overvoltage, low battery, over temperature protection and protection against lightning and transients		

9	Specification	Attached Specification, Standards and Certificates with above requirement highlighted		
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\* Note: The bidder shall mention clause by clause comment of the required specification. The bidder shall state:-

- **"FULLY COMPLIANT"** if the item offered fully meet the quotation requirement.
- **"PARTIALLY COMPLIANT"** if the item offered meet the requirement partially. The bidder shall state the reason why the offer is partially compliant. In such cases, the bidder shall clearly mention the extent to which other specifications are offered.
- **"NON COMPLIANT"** if the item cannot meet the requirements. The bidder shall also state reasons for it.

**5. Qualification of the Contractor**

- a. The contractor must have experience in installation of solar PV system for a minimum of 2years with experience in installing solar PV system of minimum 2 kWp backup system
- b. The contractor must be registered in VAT and should submit the tax clearance letter up to FY 2073/74
- c. The contractor must comply all the legal requirements of Government of Nepal.

**6. Time**

The duration of the task shall be 2 months from the date of signing the contract agreement with AEPC/RERL.

**7. Force Majeure**

Without prejudice to their right the Government and the service provider shall not be held responsible nor suffer any financial loss should the performance of the contract be delayed or prevented by an even of Force Majeure, which shall include, but not limited to strikes, riots, civil commotion, fire accident or any other incident beyond the control of either party hereto which neither party was aware of or could have foreseen at the time of signing of this contract. In even of an occurrence of the Force Majeure, either party shall notify other of the event or during such event the rights and obligations of either party shall automatically be suspended.

**8. Terms of Payment**

This contract shall be a fixed price contract.

**Amount of Percentage**

**Payment for Product**

100%

After Completion of Supply and Installation of Solar PV System

The contractor shall submit bill to RERL for the 100% of quoted amount. Out of which 75% shall be paid by RERL and 25% shall be recommended to Swachchhata Project, SNV Nepal for the payment as per understanding between RERL and SNV.

## **9. Duties and Taxes**

The contractor shall pay all tariffs, duties, other taxes or charges levied by the Government of Nepal at any stage during the execution of the work.

## **10. Evaluation Committee**

Evaluation Committee will consist of members from:  
AEPC/RERL and SNV

## **11. Deliverables**

- Completion of supply and installation of the Solar PV System
- Training local on operation and maintenance of the system

Submit Letter of Completion and Satisfactory Installation from 2 Health facilities of Jajarkot and Dolpa district.

## **12. Acceptance of RFQ**

All rights are reserved with AEPC/RERL either to approve or disapprove any RFQ without giving any reasons whatsoever. If needed, the contractor will be asked for modifications and demonstrations of the product before approval.

## **13. Documents to be submitted by the Contractor**

- a. Complete Technical Specification with supporting documents with highlight of description as mentioned in **3. Technical Specification.**
- b. Documents as mentioned in **2. Scope of Work**
- c. Document as mentioned in **4. Qualification of the Contractor**
- d. RFQ in Sealed Envelope
- e. Timeline of Completion

\*\*\*\*\*Please see BOQ in the following page\*\*\*\*\*



#### 14. Bill of Quantity (BoQ) for Health Facilities

S.No	Particulars	Description	Unit	Qty	Unit Price in Figure (NRs)	Unit Price in Word (NRs)	VAT Amount (NRs.)	Total Amount (NRs.)
1	Solar PV Module	3 kWp Mono/Poly Crystalline Solar PV Array at STC & insolation of @ 5 kWhr/m <sup>2</sup> /day. IEC Certified and RETS approved.	minimum of 250W Module	12				
2	Tubular Battery	150 AH @C10 VRLA Gel Tubular Lead Acid Battery having deep cycle discharge. The system voltage would be 48V. It should have RETS Certified. The cycle should be at least 1500 cycles @80% Depth of Discharge	Nos.	12				
3	Inverter	minimum of 3 kVA, internationally standard pure sine wave which can handle surge >125% for 30sec and generate 230V, 50Hz AC with 48V DC input having efficiency greater than 85%.	Nos.	1				
4	Charge Controller	MPPT 60A @48V international standard. RETS or UL certified.	No.	1				
5	PV Module Mounting Structure	The solar PV module structure must be made of MS hot dip galvanized suitable sections of rectangular tubes, angles and channels with necessary fixing items to be fixed in the roof of the building. The minimum thickness	per kW	3				

		of galvanization must be at least 85 microns.						
6	Battery Racking	Steel Battery rack for 12 no. of 12V 150Ah batteries for ground mounting having primer coating and paint for corrosion resistant	LS					
7	Protection Devices	Earthing Set of 600mmx600mmx3mm- 2no., Surge Protector Device 1 no. and Lightning Arrestor-1 no.	Set	1				
8	Installation Material	minimum of 16sq mm DC cable of total length 15m from Array to Charge Controller and at least 2.5sq mm single core DC cable for series and paralleling of batteries and panel, junction box etc.	LS					
9	Site verification, Installation, Testing and Commissioning	Installation Testing and Commissioning of PV System	L.S.	1				
10	Transportation	Transportation of PV Materials	L.S.	1				
Grand Total Cost for <b>one</b> Health Facility (NRs.)								
Grand Total Cost for <b>two</b> Health Facility (NRs.)								

Note: 1) The System Voltage should be 48 Volts. Bidder can propose of their own system voltage with necessary single line diagram. The voltage drop in any section should not be more than 3% of nominal voltage.

2) Both of Health facilities shall have roof mounted system. Bidder can obtain info directly from client (contact no. are given in site details section of this RfQ) regarding mounting space and transportation up to site.



Photo1 : Majpal HP Dolpa



Photo 2 : Dalli PHC Jajarkot