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GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
MEGHNA INVESTIGATION DIVISION
MSHFCS Ltd BUILDING,
4TH FLOOR, NONGRIM HILLS
SHILLONG-793003

No. MID/JEHQ-1/NIQ/2013/3079-82 Dated the 26th September, 2014

NOTICE INVITING QUOTATION

Sealed quotations are hereby invited by the undersigned on behalf of the President of India for supply of following items as detailed below. **The quotations should reach in the office of the undersigned on or before 14-10-14 up to 15.00 hrs** and will be opened on the same day i.e. **14-10-14 at 15.30 hrs** in the presence of quotationers or their authorized representatives, if any.

The undersigned reserves the right to accept or reject any or all the quotations without assigning any reason thereof.

SN	Description of Item	Quantity	Unit	Rate (in Rs.)
1.	**Solar Home Light System:** 1. **PV Module 1x 37 Wp under STC.** 2. **Battery 12V, 75Ah** 3. **Lamps 2CFL 9W or 11W** 4. **Other Components** **Specifications** **1. PV Module 1x 37 Wp under STC** **Conditions & Requirements** • The PV module should be made up of crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory. • The power output of the module(s) under STC should be a minimum of 18 Wp or 37 Wp. • The Load voltage* corresponding to the power output mentioned above should be 16.4±0.2V. • The Open Circuit Voltage* of the PV modules under STC should be at least 21.0 Volts. • The module efficiency should not be less than 10% for 18 Wp and 12% for 37 Wp modules. • The terminal box on the module should have a provision for opening, for replacing the cable, if required. • There should be a Name Plate fixed inside the module which will give: a. Name of the Manufacturer or Distinctive Logo. b. Model Number c. Serial Number d. Year of manufacture *The Load voltage and Open Circuit Voltage conditions of the PV modules are not applicable for the system	1 Set		

	having MPPT. **2. Battery:** 1x12V, 75 AH Lead Acid, Tubular positive plate flooded electrolyte or Gel or VRLA Type. or NiMH or Lithium-Ion of requisite capacity **Conditions & Requirements** • Battery should be Lead Acid, Tubular positive plate flooded electrolyte or Gel or VRLA Type and have a minimum rating of 12V, 75 Ah at C/10 rate of discharge, depending on the Model. • 75 % of the rated capacity of the battery should be between fully charged & load cut off conditions. • Battery should conform to the latest BIS/ International standards. **3. Lamps:** 2x CFLs of 9W or 11W each **Conditions & Requirements** • The lamp should be a 9 Watt or 11 Watt compact fluorescent lamp (CFL) with 4 pins only along with proper pre-heating circuit. • The lamps should be housed in an assembly suitable for indoor use, with a reflector on its back. While fixing the assembly, the lamp should be preferably held in a base up configuration. • No blackening or reduction in the lumen output by more than 10% should be observed after 1000 ON/OFF cycles - two minutes ON followed by four minutes OFF is one cycle. **4. Other Components:** Controle electronics, module mounting hardware,battery box,inter connecting wires/cables, switches etc. • The total electronic efficiency should be at least 85 %. • The inverter should be of quasi sine wave/sine wave type, with frequency in the range of 20 - 30 kHz. Half-wave operation is not acceptable. • Electronics should have temperature compensation for proper charging of the battery throughout the year. The idle current should be less than 2 mA . • The voltage drop from module terminals to the battery terminals should not exceed 0.6 volts including the drop across the diode and the cable when measured at maximum charging current. • The PCB containing the electronics should be capable of solder free installation and replacement. • Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided. **5. MECHANICAL COMPONENTS** • Corrosion resistant metallic frame structure should be provided to hold the SPV module. • The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angle. • Light source should be either for wall mounted or ceiling mounted or can be hung from the ceiling in a stable manner, as per site requirements. • A vented plastic/ wooden/ metallic box with acid proof corrosion resistant paint for housing the storage			

	battery indoors should be provided. **ELECTRONIC PROTECTIONS** (i) Adequate protection should be incorporated under "No Load" condition, e.g. when the lamps are removed and the system is switched ON. (ii) The system should have protection against battery overcharge, deep discharge condition. (iii) Load reconnect should be provided at 80% of the battery capacity status. (iv) Adequate protection should be provided against battery reverse polarity. (v) Fuses should be provided to protect against short circuit conditions. (vi) Protection for reverse flow of current through the PV module(s) should be provided. (vii) Electronics should have proper temperature compensation for proper charging of the battery throughout the year. **QUALITY AND WARRANTY** (i) All the components and parts used in **solar home systems should conform to the latest BIS or IEC specifications,** wherever such specifications are available and applicable. (ii) The Solar home lighting system including the battery will be warranted for a period of five years from the date of supply. (iii) The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. PV modules used in Solar Home Lighting System must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty five (25) years. (iv) The Warranty Card to be supplied with the system must contain the details of the system. The manufacturers can also provide additional information about the system and conditions of warranty as necessary. **OPERATION and MAINTENANCE MANUAL** An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar Home Lighting System.			

Terms & Conditions:

1. The quotations duly signed should be properly sealed and either dropped in quotation Box in the office of the Executive Engineer, Meghna Investigation Division MSHFCS Ltd. Building, 4th Floor, Nongrim Hills, Shillong-793003, or send by post. The sealed envelope should be superscribed "**QUOTATION FOR SUPPLY OF 12 V-37 Watt peak solar photo voltaic Module and Charge Control Unit " DUE DATE ON 14-10-14**".
2. In the event of the date of opening of quotation being a holiday, quotations will be opened on the next working day with timings unchanged.

3. Quotationers must have PAN/TIN/Service Tax number/VAT.
4. Photocopies of Authorized Dealership Certificate from manufacturer should be enclosed along with the quotations.
5. The pamphlets / brochures should be submitted along with the quotation.
6. The undersigned does not bind himself to accept the lowest quotation and reserve the right to accept or reject any or all the quotations without assigning any reason thereof.
7. The material must be of standard quality and as per specifications and free from all defects. The material if found defective subsequently or not conforming to the specifications as stated above, have to be replaced by the firm without any additional charges.
8. Material should be delivered at office of the Executive Engineer, Meghna Investigation Division, MSHFCS Ltd. Building, 4th Floor, Nongrim Hills, Shillong-793003, Meghalaya, only.
9. The quantity of materials may be increased or decreased at the time of supply order.
10. Material should be supplied within 30 days from the date of supply order.
11. The rates should be F.O.R. destination at Office of Executive Engineer, Meghna Investigation Division, MSHFCS Ltd. Building, 4th Floor, Nongrim Hills, Shillong-793003, Meghalaya, and inclusive of all taxes/charges including VAT/Service Tax/Transport charges/insurance etc.
12. Rates quoted should be valid at least for 180 days from the date of opening.
13. The rate should be quoted both in words and figure.
14. The payment will be made by account payee cheque for local supplier or by Demand Draft for outstation supplier on production of pre-receipted bill in triplicate only after satisfactory supply of the materials in good condition and as per specification.
15. TDS shall be deducted from the bill at the time of payment as per latest Govt. orders.
16. Security deposit @ of 10% of the total amount will be deducted from the bill amount and the same will be released after 60 days beyond the completion of warranty period.

Executive Engineer
MID, CWC, Shillong

Copy to:

1. The The Superintending Engineer, Meghna Circle, Central Water Commission, Silchar (Assam).
2. Accounts Branch, Meghna Investigation Division.
3. DB, Meghna Investigation Division.
4. Notice board of office of Executive Engineer, Meghna Investigation Division.