BHARATHIYA VIKAS TRUST–

Call for Accreditation of Vendors (North East Region)

For Supply, Installation, Commissioning and Maintenance of Solar Energy Solutions for Livelihood applications under Gap

Bharathiya Vikas Trust hereby invites bids for the Supply, Installation, Commissioning and Maintenance of Solar Energy Solutions for Livelihood applications under the Gap financing programme in the states of Assam, Meghalaya and Manipur during the year 2020-21

Bids, as per the terms and conditions should be submitted to the undersigned (by hard copy or email), at the below-mentioned address/ email ID by 5pm on or before 14/11/2020.

Procurement Officer – Bharathiya Vikas Trust
'Ananth', Perampalli, Shivalli – Udupi, Karnataka, India – 576 102
Ph. No: 0820-2570263, E-mail: procurement@bvtmanipal.org

BHARATHIYA VIKAS TRUST

TENDER NOTIFICATION

FOR

THE SUPPLY, INSTALLATION, COMMISSIONING & COMPREHENSIVE MAINTENANCE FOR 5 YEARS OF OFF-GRID SOLAR ENERGY SOLUTIONS FOR LIVELIHOOD APPLICATIONS UNDER GAP FINANCING PROGRAMME

FOR NORTH EAST REGION

IN THE STATES OF ASSAM, MEGHALAYA AND MANIPUR, DURING THE YEAR 2020-21.

TENDER DOCUMENT

Released on 06/ 11/ 2020

Address for Communication

Bharathiya Vikas Trust

Ananth, Perampalli, Shivalli – UDUPI – 576 102

PH: 0820-2570263, E-mail: procurement@bvtmanipal.org

DISCLAIMER

NIT No: 2020-21/ 06

This tender by Bharathiya Vikas Trust **(BVT)** is for accreditation of clean energy enterprises for the work of supply, installation, commissioning and comprehensive maintenance of Solar Photovoltaic (SPV) off-grid systems for 5 years, for livelihood applications in Assam, Meghalaya and Manipur during the year 2020-21. This is to enable participation under the Gap financing programme of BVT.

NOTE:

1. Though adequate care has been taken while preparing the Notice Inviting Tender (NIT) document, the Bidders shall satisfy themselves that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within three (3) days from the date of notification of Tender, it shall be considered that the Tender document is complete in all respects.
2. Bharathiya Vikas Trust reserves the right to cancel/ withdraw this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision
3. Bharathiya Vikas Trust reserves the right to modify, amend or supplement this document.
4. While this Tender has been prepared in good faith, neither Bharathiya Vikas Trust nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this Tender, even if any loss or damage is caused by any act or omission on their part.

1. CONTENTS OF BID DOCUMENT

2. List of Documents to be Submitted

Bharathiya Vikas Trust

Ananth, Perampalli, Shivalli – UDUPI – 576 102
PH: 0820- 2570263
E-mail: procurement@bvtmanipal.org

SOLAR TENDER: 2020-21/06; Dated 06-11-2020

NOTICE INVITING TENDER

Procurement Officer of Bharathiya Vikas Trust (BVT), Karnataka State, India hereby invites bids for supply, installation, commissioning & comprehensive maintenance for 5 years of off-grid solar energy solutions for livelihood applications in Assam, Meghalaya and Manipur, during the year 2020-21. These bids will be used to accredit clean energy enterprises who can participate in the Gap financing programme being undertaken by BVT.

1.	Tender Ref No.	2020-21/ 06
2.	Last date & time for the bid submission	14/11/2020 at 5pm

Interested and eligible bidders may furnish the Technical & Commercial Bids for supply of solar systems to the below mentioned address/ email ID

Bharathiya Vikas Trust
Ananth, Perampalli, Shivalli – UDUPI, Karnataka, India – 576 102
PH: 0820- 2570263,
E-mail: procurement@bvtmanipal.org

Any further information or clarification may be obtained by email from procurement@bvtmanipal.org.

sd/-
Procurement Officer
Bharathiya Vikas Trust

INSTRUCTION TO BIDDERS

Eligibility to bidders:

I. Organization should be in operation for atleast 1 year in the field of supply, installation and maintenance of Solar Energy Solutions.
II. Company registration certificates or any other proof of incorporation to be submitted to establish the legal status.
III. The company should be able to provide excellent service. It is expected that complaints will be addressed within 72 hrs of lodging. The company should provide a list of service centers or contact points in the region.
IV. Solar panels used by the company should be of a supplier in India and should have manufacturing company name and the technical specifications
V. Audited IT return for last financial year.
VI. PAN card for the Organization.
VII. Documents to establish that the organization has implemented projects of cumulative worth Rs 10 lakhs or more in the last one year.
VIII. Service provider should provide service for the system for a minimum period of 1 year. This should include one scheduled service for every six months.

Cost of bidding:

The bidder shall bear all costs associated with the preparation and submission of Bid to the Procurement Officer, Bharathiya Vikas Trust herein after referred to as "the Purchaser". The Purchase will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

Technical proposal shall contain:

I. Particulars of the Firm as per Annexure - 2
II. Checklist of Documents to be submitted as per Annexure - 3
III. The bidder has to submit acceptance letter of guarantee for 5 years for the total
performance of the Solar Energy Systems
IV. The bidder has to provide **nearest local service** centre details
V. The bidder has to sign all the pages of the documents as token of acceptance of all terms and conditions.

Financial bid shall contain:

The rate quoted for supply of Solar Energy Solutions at the respective sites. The rate quoted should include GST, packing, forwarding charges including loading and unloading, installation and commissioning, etc.

Price schedule:

The Bidder shall complete the price schedule as per **Annexure 4 - PRICE SCHEDULE** furnished in the Bidding Documents, indicating the total cost towards supply, installation, commissioning and Maintenance of solar energy solutions for livelihood solutions as per the Technical specifications mentioned in the **Annexure – 1(a) TECHNICAL SPECIFICATIONS FOR SOLUTIONS.**

Final Price:

Prices quoted by the Bidder will be used for accreditation of the Bidder as a 'Clean Energy Enterprise under the Gap financing programme' and to determine the benchmark price of each solution category. The final price may wary based on transportation and other associated costs. However, BVT will use the prices quoted to finalize the benchmark price for the region and therefore the gap financing support for each solution category.

Format and Signing of Bid:

The Bidder shall submit copies of all the documents by email to procurement@bvtmanipal.org or hard copies may be submitted by hand or post/courier to the below mentioned address Procurement Officer, Bharathiya Vikas Trust, Ananth, Perampalli, Shivalli – UDUPI, Karnataka, India – 576 102

Deadline for Submission of Bids:

Bids must be received by the Purchaser not later than the time and date specified in the invitation for Bids (Section I). The Purchaser may, at its discretion, extend this deadline for submission of bid by amending the bid documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

Tender Opening and Evaluation of E-Tenders:

All Technical & Financial bids received will be opened on Dt. 16/11/2020 between 3pm and 5.00pm. The Bidders Names, Bid Modifications, or Withdrawals, Bid prices, Discounts and the presence or absence of the requisite details will be recorded by the Procurement Officer and submitted to the Accreditation and Benchmarking committee of the Bharathiya Vikas Trust. No Bid shall be rejected at bid opening, except for late bids, which will be rejected.

Clarification of Bids:

During evaluation of Bids, the purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing (via email) and no change in prices or substances of the Bid shall be sought, offered or permitted.

Preliminary Examination:

The purchaser will examine the Bids to determine whether they are complete. Any incomplete bids will be rejected. The purchaser may waive any minor infirmity or non-conformity or irregularity in a bid, which does not constitute a material deviation.

Acceptance or rejection of bids:

- Procurement Officer, Bharathiya Vikas Trust reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to accreditation, without there by incurring any liability or any obligation to inform the affected bidder or bidders of the grounds for the said action.
- Any Bid with incomplete information is liable for rejection.

ANNEXURE 1(a):

TECHNICAL SPECIFICATIONS OF SOLUTIONS

NORTH EAST REGION: Assam, Meghalaya and Manipur

Category (North East region)	Panel Capacity with Module Mounting Structure	Battery Capacity with Battery Rack	CR/ Inverter Capacity	Cables		Safety Equipment
Cat – NE 1 (Single Cluster Milking Machine – 5 cows)	100Wp	80 Ah, 12 V X 1 No.	20 A, 12 V –	2.5 sq.mm X 10 m 4 sq.mm X 10 m 10 sq.mm X 12 m 10 sq.mm 2C X 3 m	5W, 12 V – DC LED light X 1 No.	
Cat – NE 2 (Single Cluster Milking Machine – 10 cows)	150 Wp	120 Ah, 12 V X 1 No.	20 A, 12 V –	2.5 sq.mm X 20 m 4 sq.mm X 10 m 16 sq.mm X 20 m 16 sq.mm 2C X 4 m	10W, 12 V – DC LED light X 1 No.	
Cat – NE 3 (Double Cluster Milking Machine – 15 cows)	180 Wp	80 Ah, 12 V X 2 Nos.	20 A, 24 V –	4 sq.mm X 40 m 10 sq.mm X 30 m 10 sq.mm 2C X 5 m	5W, 12 V – DC LED light X 2 Nos.	
Cat – NE 4 (Double Cluster Milking Machine – 25 cows)	330 Wp	150 Ah, 12 V X 2 Nos.	20 A, 24 V –	2.5 sq.mm X 10 m 4 sq.mm X 10 m 10 sq.mm X 12 m 10 sq.mm 2C X 3 m	5W, 12 V – DC LED light X 2 Nos. 10W, 12 V – DC LED light X 2 Nos.	
Cat – NE 5 (Rice Mill Unit –240 Kg/day in Northeast) **Integrated Huller + polisher – 2 hp.** **Pre-Cleaner – 0.5 hp.** **Grader – 0.5 hp.**	3.96kWp	200 Ah X 8 Nos.	Will be provided by the machine manufacturer	4 sq.mm X 48 m 16 sq.mm X 30 m 25 sq.mm X 12 m Earthing Cable-10 sq.mm X 25 m		AJB – 6 IN 1 OUT with SPD & MCB X 1 No. Double pole MCB – 63 A, 230 Vac X 1 No. Lightning Protection System – Lighting arresto

						r rod, conductors, earthing strip, and insulator. X 1 No.
Cat- NE 6 (DC Fridge-100 Litre)	400 Wp	80 Ah, 12 V X 2 Nos.	20 A, 24 V –	6 sq.mm X 30m 10 sq.mm X 3 m		Double Pole MCB – 16 A, 24 V
Cat – NE 7 (Pottery Wheel) – standard design	330Wp	100 Ah, 12 V X 2 Nos.	30 A, 24 V – Hybrid Charge Regulator with 5A grid charger	4 sq.mm X 20 m 6 sq.mm X 20 m 10 sq.mm X 6 m Earthing Cable-10 sq.mm X 10 m		Double Pole MCB – 32 A, 24 V Earthing Kit – 2 Nos.

I, _____ (Name of signatory) on behalf of the bidder _____(Name of the bidder), hereby certify that I have noted the technical specifications of solutions mentioned above and the prices quoted in Annexure 4 are as per the details specified above and comply with the technical specifications mentioned in Annexure 1 (b).

Signature
(Name and Address of the Bidder with seal)
(In the capacity of……. Duly authorized to sign the Tender for and on behalf of_____)

ANNEXURE 1(b):

TECHNICAL SPECIFICATIONS OF COMPONENTS

The proposed project shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancelation of Letter of Award & Competent Authority's decision will be final and binding on the bidder.

SOLAR PV MODULE:

The PV modules used must qualify to the latest edition of IEC PV module qualification test. The total solar PV array capacity should not be less than allocated capacity and should comprise of solar crystalline modules of minimum Wp mentioned in the bill of materials/ above wattage. Module capacity less than minimum the mentioned Wp shall not be accepted.

- PV modules must be tested and approved by one of the IEC authorized test centres. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.

The following information must be mentioned in the ID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions).

- Name of the manufacturer of the PV module.
- I-V curve for the module Wattage, Imax, Vmax and FF (Fill Factor) for the module
- Unique Serial No and Model No of the module

Materials Warranty

- Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (5) years from the date of sale to the original customer ("Customer")
- Defects and/or failures due to manufacturing.
- Defects and/or failures due to quality of materials
- Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option.

Performance Warranty

The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25-year period and not more than 10% after first ten years period of the full rated original output

MOUNTING STRUCTURE

a. Hot dip galvanized MS/ anodized aluminium of size not less than 50 mm x 50 mm x 5 mm size shall be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum irradiation.
b. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Installation of solar structure should not damage the roof in any way. If any concrete or foundation is required, it should be pre cast type.

DC COMBINER BOX/ARRAY JUNCTION BOX:

a. The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JBs shall be such that input & output termination can be made through suitable cable glands
b. Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification

BATTERY:

- Lead acid Tubular type
- All the batteries should have a C/10 rate of discharge. The voltage of each battery should be of 12 V.
- Battery should conform to the latest BIS/ International standards. A copy of the relevant test certificate for the battery should be furnished.
- The battery should be warranted for minimum 5 years.
- The battery should be installed inside the premises of consumers on a Battery rack of acid resistant material to bear the required battery load. The non-reactive acid proof mat should be provided around the floor space of battery bank

PCU/ INVERTER:

The power conditioning unit should be provided to convert DC power produced by SPV modules, in to AC power. The power conditioning unit/inverter should be Off-Grid type. Typical technical features of the inverter shall be as follows:

Power conditioning unit with inbuilt charge controller of capacity & ratings as specified in the below for various capacity of Solar Power Plants should convert DC power in to AC power, must confirm to standards.

The PCU will have the following features:

- MOSFET / IGBT based MPPT charging
- Output voltage 220V, +/-3% f modified/ pure sine wave for single phase.
- Output frequency: 50 Hz, +/- 0.5 Hz
- Capacity of PCU/ Inverter is specified at 0.8 lagging power factor

- THD: less than 3% Efficiency: >85% at full load
- Ambient Temp 50 degree Celsius (max.)
- Operating humidity 95% maximum

Protections:

- Over voltage (automatic shutdown)
- Under voltage (automatic shutdown)
- Overload - Short circuit (circuit breaker & electronics protection against sustained fault)
- Over Temperature
- Battery, PV reverse polarity

Indicators

- Array on
- MPPT charger on
- Battery connected, charging
- Inverter ON
- Load on solar/ battery
- Grid charger on
- Load on Grid
- Grid on
- Fault

Display Parameters

- Charging current
- Charging voltage
- Voltage of PV panels
- Output voltage
- Grid voltage
- Inverter loading (kW) & Energy Generation (kWh)
- Output frequency
- Fault / fault code

Cooling: Air Cooled

The PCU/ inverters should be tested from the MNRE approved test centres / NABL /BIS accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

SOLAR CHARGE CONTROLLER

- Control of the maximum charge of the battery by means of a steady-voltage charging
- Protection against polarity reversal of PV array and battery, Over Current, Short Circuit, Deep Discharge, Input Surge Voltage; Blocking diode protection against battery night time leakage through PV Module.
- Temp. Compensation.

PROTECTIONS

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

LIGHTNING PROTECTION

The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors.

CABLES

Cables of appropriate size to be used in the Project shall have the following characteristics:

- Temp. Range: –10oC to +80oC.
- Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- Flexible
- Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire Project to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
- The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. twenty five (25) Operational Years.

TOOLS & SPARES:

a. After completion of installation & commissioning, necessary tools & spares shall be maintained by the successful bidder for maintenance purpose

SAFETY MEASURES:

The bidder shall take entire responsibility for electrical safety of the installation(s) and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA guidelines etc

ANNEXURE 2

DETAILS OF THE ORGANISATION

1	Name of the Supplier	
2	Year of starting the organization & registration number (photocopy of registration certificate or any other relevant document to be enclosed)	
3	Address of the Supplier (along with phone no.& pin code)	
4	Status of Supplier	Proprietorship / Partnership/ Pvt Ltd / Limited/others
5	(a) GSTIN (b) PAN No. of Income Tax Dept. (Photocopy of Income Tax (IT)) returns for the last Financial Year years to be enclosed	
6	Audit reports for the last years (Certified copy of Chartered Account' report in P&L account to be enclosed)	
7	Experience of Supplier/supplier relating to supply of solar energy-based solutions (supporting certificates to be enclosed)	
8	Particulars of Physical Infrastructure and total strength of staff available in the organization relating to Supplier/supply/testing etc.,	

Signature of the bidder and address with seal

Date:

ANNEXURE - 3

Sl.No.	Description	Whether the Document is enclosed or not	Page No. From and to
1	Details of Organization as per Table –I	YES/NO	
2	Copies showing the legal status, places of registration and principal place of business of the firm	YES/NO	
3	Copies of audited financial statements for the last financial years	YES/NO	
4	Copies of GST registration and GST returns filled in the last financial years	YES/NO	
5	Copies of income tax registration and income tax returns filled in the last financial years.	YES/NO	
6	Acceptance to give 5 years guarantee for trouble free operation and maintenance.	YES/NO	
7	Address of the nearest official Service Centre of the company.	YES/NO	

I abide by all the above terms & conditions.

PLACE:
DATE:

SIGNATURE OF THE BIDDER and with office seal

ANNEXURE 4

PRICE SCHEDULE

PARTICUILARS TOBE SUBMITED IN THE TABLE BELOW:

PRICE SCHEDULE FOR THE SUPPLY, INSTALLATION, COMMISSIONING &COMPREHENSIVE MAINTENANCE FOR 5 YEARS OF OFF-GRID SOLAR ENERGY SOLUTIONS FOR LIVELIHOOD APPLICATIONS IN THE STATES OF Assam, Meghalaya and Manipur DURING THE YEAR 2020-21, UNDER THE GAP FINANCING PROGRAMME OF BVT.

Rates quoted by the bidder:

I. The rates should be mentioned solution category wise, clearly both in words and figures.
II. Rates should be inclusive of GST.
III. Rates should include an average transportation cost for supply of solution category in the region of operation of the bidder.

NORTH EAST REGION: Assam, Meghalaya and Manipur

Category (North East region)	**Final rates in INR (all-inclusive and as per conditions mentioned above)**
Cat – NE 1 **(Single Cluster Milking Machine – 5 cows)**	
Cat – NE 2 **(Single Cluster Milking Machine – 10 cows)**	
Cat – NE 3 **(Double Cluster Milking Machine – 15 cows)**	
Cat – NE 4 **(Double Cluster Milking Machine – 25 cows)**	
Cat – NE 5 **(Rice Mill Unit –240 Kg/day in Northeast)** **Integrated Huller + polisher – 2 hp.** **Pre-Cleaner – 0.5 hp.** **Grader – 0.5 hp.**	
Cat- NE 6 **(DC Fridge-100 Litre)**	
Cat – NE 7 **(Pottery Wheel) – standard design**	

CONDITIONS:

1. If our tender is accepted and accreditation granted to our enterprise/ organization, we hereby undertake to abide by the stipulated Terms and Conditions, to supply, install and maintain solar energy-based solutions for livelihood applications.
2. If accredited, we agree to abide by the conditions of the BVT Gap financing programme. We will strictly observe the laws against fraud and corruption in force in India namely "Prevention of corruption act 1988".
3. We understand that you are not bound to determine the benchmark price based on the lowest offer that you may receive.
4. We accept that all disputes between parties will be adjudicated by a competent courtin Udupi, India.

I, _____ (Name of signatory) on behalf of the bidder _____(Name of the bidder), hereby certify that I have noted the technical specifications of solutions mentioned in Annexure 1 (a) and the technical specifications for components mentioned in Annexure 1 (b) and the prices quoted above are as per the details specified and in compliance with Annexure 1 (a) and 1 (b).

Dated this……. day of……2020.

Signature
(Name and Address of the Tender with seal)
(In the capacity of……. Duly authorized to sign the Tender for and on behalf of_____)