

**GOVERNMENT OF MIZORAM  
DIRECTORATE OF HORTICULTURE  
MIZORAM: AIZAWL**

No.B.17013/27/2019-DTE (HORT-HMNEH-PHM)/<sup>301</sup> Dated Aizawl, the 10<sup>th</sup> Feb. 2020

**TENDER NOTICE**

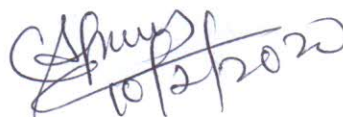
Sealed Tender is hereby invited from authorized firm/ company/ manufacturer for supply and installation of Solar dryer under Integrated Post Harvest Management of MIDH 2018-2019. Tender may be submitted on or before 05.03.2020 upto 12:00 noon and the same will be opened on the same day at 1:00 Pm at Committee Room, Directorate of Horticulture, Aizawl.

The complete bid documents should be dropped in the Tender Box placed at P.A Cell of the Director, Directorate of Horticulture, Aizawl. Tender Forms with detail Tender Terms and Conditions, etc. can be obtained from Vegetable Section, 4<sup>th</sup> Floor, Directorate of Horticulture, Aizawl during office hours on working days. The same may be downloaded from the website of [www.horticulture.mizoram.gov.in](http://www.horticulture.mizoram.gov.in)

**Sd/- Dr. ELIZABETH SAIPARI**  
Director of Horticulture,  
Mizoram : Aizawl.

No.B.17013/27/2019-DTE (HORT-HMNEH-PHM)/<sup>301</sup> Dated Aizawl, the 10<sup>th</sup> Feb. 2020  
Copy to:

1. P.P.S to Additional Chief Secretary, Horticulture Department for information.
2. P.S to Secretary, ICT for information and necessary action.
3. Director, Horticulture Department for information and necessary action as per notification of ICT No.B.12012/1/2012-ICT Dt. 18.10.2016.
4. Director, I&PR, Mizoram, Aizawl for information with a request publish the Tender Notice in 2 (two) local daily Newspaper for 3 (three) consecutive days, 3 (three) spare copies are hereby attached. He is request to refer the bulb to Director of Horticulture, Government of Mizoram for payment after it is duly certified.
5. Dy. Director (E&T), Directorate of Horticulture with a request to publish in Department website.
6. Notice Board.
7. Guard File.

  
**(Dr. ELIZABETH SAIPARI)**  
Director of Horticulture,  
Mizoram : Aizawl.

**TERMS AND CONDITIONS FOR SUPPLY AND INSTALLATION OF SOLAR DRYER UNDER INTEGRATED POST HARVEST MANAGEMENT- MISSION FOR INTEGRATED DEVELOPMENT OF HORTICULTURE (MIDH)**

- 1) Tender should be submitted in two envelope system clearly mentioning Bidders' Name, Address on both the envelopes. Envelopes should be superscripted "Technical Bid" or "Financial Bid" as the case may be Both envelopes are to be put in large sealed envelope superscribed as below:

"Quotation for Supply and Installation of Solar Dryer under Integrated Post Harvest Management – MIDH 2018-2019"

- 2) The sealed quotation should be addressed to :  
*Director of Horticulture,*  
*Mizoram, Aizawl.*

- 3) Bids are invited for Solar Dryer with the following Technical Specifications:-

Sl. No.	Items/ Components	Technical Descriptions/ Specifications
I	Product	<p><b>Solar Dryer:</b></p> <p>a) Door of the drying chamber must be protruding, housed inside the chamber and securely put up on the wall of the chamber with good quality hinges.</p> <p>b) The chamber must have provision for exhaust and recirculation option (on the top-side) alongwith provision of installation of a Polycrystalline Photovoltaic module of 72 cells and a Charge Controller.</p> <p>c) The chamber must be provided with guide cut trays to bear produces to be dried.</p> <p>The Chamber must also house Thermal Batteries on top of a suitable mounting arrangement.</p> <p>The solar drying unit must have –</p> <ul style="list-style-type: none"> <li>i. Dual jacketed Evacuated Tube Collector (ETC) based manifold.</li> <li>ii. Mounting stand</li> <li>iii. Collector manifold Header</li> <li>iv. DC Axial Fan/ Blower (with temperature as high as 120-180°C) and Recirculation Fan (with temperature as high as 50-80°C)</li> <li>v. Solar Photovoltaic (PV) Panels and Charge</li> </ul>





II	Materials	Drying chamber should be made of 60mm PUF (Poly Urethane Foam) panels with food grade SS 304 (Stainless Steel) on the inside and PPGI (Pre-Painted Galvanised Iron) sheets on the outside.
III	Principle	Evacuated Tube Collector Solar Air Heating with dual jacketed manifold arrangement and air is the medium of heating.
IV	Drying Capacity	a) Solar dryer must be able to dry 125 kgs/ batch. b) Duration of Dehydration/ drying process of not more than 48 hours for fruits/ ginger/ turmeric etc.
V	<b>Detail Specifications:</b> a) Evacuated Tube Collector (ETC) with heat pipes or dual jacketed manifold.	a) Heat Pipe based Evacuated Tube Collector (ETC) manifolds. b) One unit must have two collectors of 3m <sup>2</sup> aperture area each with 80mm distance between tubes or a manifold with 50 tubes with more than 5.24 sq. m. aperture. c) Each collector of 3m <sup>2</sup> must consists of 30 nos. Evacuated tubes i.e., Heat Pipes or manifold consists of 50 tubes in concentric arrangement
	b) Mounting Stand.	a) The Evacuated Tube Collector (ETC) must be mounted on Aluminum/ GI with assemble features.
	c) Collector Head	a) The Collector Head must be Vacuum Tube Borosilicate Glass materials coated with ALN (Al-Nitride)/ Stainless Steel (SS)/ Copper (Cu). i. Tube (OD) = 58mm ii. Tube (ID) = 47mm iii. Tube length = 1.8m iv. Heat pipe diameter = 8mm v. Heat pipe length = 2m vi. Condenser length = 90mm vii. Condenser diameter = 16mm viii. Condenser wall thickness = 1.2mm ix. Transferring medium = Antifreeze liquid (glycol). x. Al. FIN Length = 19.5m xi. Al. FIN thickness = 0.4mm xii. <b>Sealing Plug</b> : Silicon rubber with Stainless Steel (SS).



Sl. No.	Items/ Components	Technical Descriptions/ Specifications
	d) Collector Header Assembly	<p>a) Header Pipe material : Cooper  b) Header Pipe diameter : 3 inches  c) Installation material : PUF  d) Inlet Side : DC Blower  e) Outlet Side: Interconnection with Dryer Cabinet 300mm extra length copper pipe should be provided after the last (furthest) ETC tube with valve arrangement.</p> <p style="text-align: center;">OR</p> <p>Dual jacketed manifold with 50 ETCs with two separate chambers for cold air and hot air and a concentric arrangement of the non vacuum and ETC vacuum tubes.</p>
	e) Fan/ Blower	<p>Two types of Fan/Blower –</p> <p>a) High temperature : DC Aerial Fan/ Blower. Air flow of more than 5m<sup>3</sup> / min or 175 CFM (cu ft. per min). Voltage of 12/ 24 volts.  b) Normal temperature : Recirculation fan for generation/ even distribution of normal temperature. Similarly air flow of more than 5m<sup>3</sup> / min or 175 cfm Voltage of 12/24 volts.</p>
	f) Photovoltaic (PV) Panel and charge controllers	<p>a) PV Panel of multi crystalline panels  b) Capacity of 300 watt.  c) CC voltage of 24 volts.</p> <p><b>Note</b> :- PV Voltage should matched the DC fan voltage.</p>
VI	<b>After sales services (The firm should provide) -</b>	
	a) Warranty & Guarantee	Onsite warranty for a period of 1 year from the date of commissioning along with supply of accessories
	b) Services	Trained engineers/ personnel must be positioned onsite to provide prompt onsite warranty services at least for 7 days. Training of the beneficiaries must also be ensured for operation and maintenance for the unit supplied.
	c) Spare parts	Adequate spare parts necessary for a period of 1 year repairs shall be supplied alongwith the unit.





- 4) Diagram of the Solar dryer/ catalogues and/ or Data sheets with proper labeling and description of the functions of all major components must be submitted alongwith the tender.
- 5) Supply of the Solar Dryer must be as per the specifications and designs mentioned.
- 6) Solar Dryer unit must be tested at National Institute of Solar Energy for which NISE test Report must be submitted alongwith the tender.
- 7) Firm/ Company having experience in such similar field with proof of experience will be given priority.
- 8) The Firm/ Company should have GST Provisional ID which must be supported by relevant document.
- 9) The Firm/ Company should have company registration no. issued by competent Authority/ Agency of the Govt. of India which must be supported by relevant documents.
- 10) The financial bid of only tenderer(s) who are technically qualified will be opened.
- 11) The requirement for Supply and Installation of Solar Dryer is for post harvest management implementation under 2018-2019 with fund provision of Rs. 67.50 lakh (Rupees sixty seven lakh fifty thousand only).
- 12) The "Financial Bid" should be accompanied by EMD of 1.25% of quoted amount in the form of bank draft/ banker cheque duly pledge in favour of Director of horticulture, Govt. of Mizoram, Aizawl. Release of the same may be done as per rule by the Department after finalization of tender.
- 13) The Firm/ Company must have a turnover of at least 2 crores average over the last 3 financial yields which must be supported by relevant documents.
- 14) Rates for Solar Dryer unit should be quoted clearly both in figure and in words and any over writing should be clearly initiated by the quotationer(s) with date. Rate for Solar Dryer unit should be inclusive of all taxes, commissioning, transportation/ shipping, packaging, insurance, unpacking, loading and unloading, labours, managerial works etc. f.o.r. destination.
- 15) **Performance Security** :-
  - i. The successful tender, if awarded contract/ supply/ work order must deposit Performance Security Actual amount shall be mentioned in Supply/ Work Order.



- ii. The Performance Security will be liable to be forfeited if the successful tenderer breaks/ withdraws/ amends/ impairs or derogates from the tender in any respect.
  - iii. The Performance Security may be released only after expiry of warranty period provided the materials have been delivered and assembled to the full satisfaction of the Department.
- 16) The Department reserves the right to accept any quotation it considers to be in its best interest and is not bound to accept the lowest rate and need not assign any reason(s) thereof for its non-acceptance.
- 17) Any firm that has been awarded the tender shall not in any manner whatsoever handover or assign the work to any other sub-agency or third party without prior approval of Director of Horticulture, Mizoram, Aizawl.
- 18) No advance payment will be made for supply of the Solar Dryer Unit and its installation.
- 19) Payment will be made only after receipt of materials in full and in good conditions and/ or after installation whatever the case may be, on submission of completion certificate/ Bill accompanied by tax clearance certificate duly certified by competent authority.
- 20) Information regarding litigation, exertions and blacklisting, if any, shall be submitted with details to enable evaluation by the committee.
- 21) Non-compliance of any of the tender terms and conditions will result in summary rejection of the tender.
- 22) In the event that any dispute or differences arises between two or more bidding firms, the Department will have no involvement whatsoever. However, in case of differences or dispute by a firm or firms against the Department, the matter maybe settled through mutual and amicable discussions. Only if such differences cannot be resolved through dialogue, the matter may then be resolved through the court of law of the State of Mizoram jurisdiction only.





## Proforma for Submission of Quotation

To,

The Director,  
Department of Horticulture  
Mizoram, Aizawl.

Subj: Submission of quotation against Tender no. ....  
Dated .....

Madam,

I/We have carefully examined and read the Notice Inviting Short Tender, Tender Terms and Conditions and all other documents attached regarding Tender No. .... dated ..... I/We hereby express my/ our interest for Quotation of **Supply and Installation of Solar Dryer under integrated Post Harvest Management- MIDH, 2018-2019** according to the terms and conditions mentioned therein.

I/We enclose herewith Earnest Money Deposit of ..... (Amount) in the form ..... from ..... (Name of Bank) in your favour.

I/We certify that I/We have carefully read each and every terms and condition and Technical Specifications given in this Tender Documents and understood the same, and I/We confirm our acceptance of the same.

I/We further certify that I have suppressed no fact in the Tender which could debar me to participate into the Tender. If it is revealed after opening of the tender that any fact is suppressed by me, tendering authority shall have the right to reject my Tender.

I/We hereby also declare that I am not blacklisted by any Department / Agency of Central or State regarding quality compromise or any other reason in connection with similar work and there is no ongoing litigation with any Department / Agency of Central / State Government as on closing date of tender. If subsequently it is revealed after opening of Tender / concerned agreement will be cancelled, deposited earnest / security money will be forfeited and other penalty to be decided by the Tender authority will be imposed.

Dated: .....

Place: .....



Signature of Bidder: .....

Full Name of Bidder: .....

Seal: .....

**TENDER FORM – I**  
**“Technical Bid”**

**TENDER FOR SUPPLY AND INSTALLATION OF SOLAR DRYER UNDER  
INTEGRATED POST HARVEST MANAGEMENT- MIDH, 2018-2019**

1. Tenderer details as per format (**Annexure-I**) : Yes/ No
2. Authorization / Dealership Certificate from Manufacturing Company (enclosed) : Yes/ No
3. Diagram/ Catalogue/ Data Sheet with proper labeling (**enclosed**) : Yes/ No
4. Agreed to supply all the required materials as per Technical Specifications issued by the Department of Horticulture, Government of Mizoram : Yes /No
5. Test Report from National Institute of Solar Energy (NISE) : Yes /No
6. Experience enclosed : Yes/ No
7. GST Provisional ID (**enclosed**) : Yes / No
8. Govt. recognized Company/Firm/ Agency Registration (**enclosed**) : Yes / No
9. Earnest Money Deposit in the form of Demand Draft / Bankers' cheque : Yes /No
10. Amount of Earnest Money Deposit (EMD) : Rs. ....

Dated : .....

Signature .....

Date with Seal.....





## DETAILS OF TENDERER

1	<b>Name of Tenderer</b>	:
	Registered Address	:
	Contact No.	:
	Email ID	:
	Website	:
2	<b>Factory Address</b>	:
	Contact No.	:
	Email ID	:
	Fax No.	:
3	GST No.	:
4	PAN No.	:
5	MSME Regn. No. (if MSME)	:
6	<b>Bank related information</b>	:
	Bank Name	:
	Branch Name	:
	Bank Address	:
	Bank MICR Code (9 digit)	:
	IFSC	:
	Account type	:
	Account Name	:
Swift Code	:	



**TENDER FORM – II**

**“Financial Bid”**

**TENDER FOR SUPPLY AND INSTALLATION OF SOLAR DRYER UNDER  
INTEGRATED POST HARVEST MANAGEMENT- MIDH, 2018-2019**

1. Name of Tenderer : .....
2. Address of Tenderer : .....
3. Contact No. : .....
4. Rate quoted f.o.r destination :

Sl. No.	Items	Specifications	No. of Unit	Rate /Unit	TOTAL (Rs.)
I.	<b>Supply and Installation of Solar Dryer under Integrated Post Harvest Management- MIDH f.o.r destination</b>				
a.	Solar Dryer	Capacity of 125 kg/ batch with drying vcapacity of not more than 48 hours	1 No.		
<b>SUB-TOTAL (I)</b>					
II.	Goods and Services Tax (GST) ..... %				
III.	Handling charges				
IV.	Installation charges				
<b>SUB-TOTAL (II to IV)</b>					
<b>GRAND TOTAL (Sub-Total I, II, III &amp; IV)</b>					<b>3,75,000.00</b>

*(Rupees three lakh seventy five thousand) only*

Dated : .....

Signature .....

Date with Seal .....

