

BIDHAN CHANDRA KRISHI VISWAVIDYALAYA



**Dr. P.K. Sahoo**  
**Professor & Head**  
**&**  
**PI, RKVY Project**

FACULTY OF AGRICULTURAL ENGINEERING

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Ref. No: FAE/FE/RKVY/217

Dated: 23.11.2017

e-Tender ID: 2017\_BCKV\_139015\_1 Dated 23.11.17

**NOTICE INVITING TENDER**

PI of the Project entitled “Infrastructural Support for Establishment of a Solar Assisted Vapour Absorption Refrigeration System for Cooling of Fruits and Vegetables” under RKVY is inviting tenders from competent and *bonafide* vendors/ parties/ distributors/ dealers/agents/ manufacturers having registration of GST for supply of following items to Department of Food Engineering, BCKV, Mohanpur campus **within 13<sup>th</sup> December,2017** as per specifications appended herewith. Quotation of equipment must include essential accessories also, like, gas cylinder, regulator, exhaust hood, computer, voltage stabilizer, UPS from branded company, in Indian Rupees only, even if the main equipment is quoted in foreign currency. Without essential accessories tender will be considered as incomplete. Quoted rates of all the equipment and items, including imported ones are must be FORDESTINATION (up to delivery at the laboratory) and satisfactory installation and demonstration. Vendors are requested to include the cost involved in transportation from airport to laboratory, airport tax, custom duty (if applicable), etc in their quotation. However, University will provide valid DSIR and authorization certificate to the clearing agent, if required. Scanned copy of all documents must be uploaded in the tender portal.

v) EMD: Vendors are required to pay the requisite amount (Rs.5000) as EMD draft as specified against their quotation. Scan copy of the requisite draft must be uploaded as supporting document during submission of e-tender. Without EMD quotations will not be considered for technical comparison. Draft must be in favour of ‘Bidhan Chandra Krishi Viswavidyalaya’ payable at Kalyani (IFSC: SBIN0001082).

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SL No.	Name of the Item/Equipment	Qty.	Detail Specifications	Total Price(Rs)
1.	<b>Cooling Chamber with Air Handling Units (AHU) for storage of fruits and vegetables</b>	One	<p>(i) Supply of pre-fabricated 60mm thick PUF panel cold rooms with inter locking system, density 40kg/m<sup>3</sup>, internal &amp; external finish with 24gauge pre-painted GI sheet and floor with 100mm thick polystyrene/60mm PUF slab. Cold room shall be of 3 chamber construction with flush type swing door of size: 78inch X 34inch, 60mm PUF. Each chamber shall be of size: 3.0 m (Length) X 3.0 m (Width) X 2.4 m (Height) (external dimensions).</p> <p>(ii) Supply of floor mounted air handling units (3 nos.) with copper pipe, aluminium finned chilled water cooling coil(inlet 3.5 degC &amp; outlet 5.5 degC, flow 7.5m<sup>3</sup>/hr.max.) and water spray system to maintain humidity. AHU shall be Aluminium frame &amp; double wall insulated construction, forward curve fan, belt drive <i>motor etc.</i></p> <p>(iii) Supply of MS ERW heavy chilled water pipe line 40mm NB with 19mm thick elastomeric nitrile rubber insulation with necessary valves &amp; fittings (Total Lengths of pipe lines of about 30.0 m).</p> <p>(iv) supply of MS ERW heavy chilled water pipe line 25mm NB with 19mm thick elastomeric nitrile rubber insulation with necessary valves &amp; fittings (Total Lengths of pipe lines of about 18.0 m).</p> <p>(v) Supply of electrical panel with VFD for air handling unit, digital temperature controller and humidistat for maintaining room temperature &amp; humidity with necessary instrumentation &amp; cabling. Room temperature can be set &amp; maintain between 7 degC to 15 deg C &amp; RH between 70% to 90%.</p> <p>(vi) Chilled water re- circulation pump 7.5 m<sup>3</sup>/hr at 25 mtr head. Installation, commissioning and testing of the entire system</p>	

2.	<b>Reverse Osmosis (R.O) plant for production of soft water</b>	One	Capacity 250 l/h, TDS in treated water will be less than 100 ppm, proper pretreatment along with two numbers of UF (ultra filtration) filter cartridge, UV, raw and treated water storage tank, raw and treated water SS pump and pipelines, panel and automation system. Installation and commissioning, warranty and free service etc.	
3.	<b>Electric Hot Water Generator</b>		<p><b>(i) Specifications</b>  Rating : 36KW  Temperature Control :  Microprocessor/PLC based step controller  Test Pressure : 150 psig  Temperature Inlet : 85<sup>0</sup> C  Temperature Outlet : 90<sup>0</sup> C  Flow rate : 103 LPM</p> <p><b>(ii) Materials of construction:</b>  <b>Enclosure:</b> Hot Water Generator made out of steel and should be suitable for Indoor installation.  <b>Shell :</b>made of MS sheet  <b>Connection:</b> Inlet &amp; outlet pipe with MS flange end and mating flanges, descaling &amp; drain outlets.  <b>Heating Elements:</b> Electrical resistance type heating elements capsulated in seamless copper tubes suitable for 240V±10% 50Hz 1 phase supply.</p> <p><b>(iii) Electrical Characteristics :</b>  <b>Temperature Control Panel:</b> Micro processor/ PLC based multistage electronic progressive staging sequencer with thermistor/ PT100 sensor to control the HWG in stages. Panel should be designed for automatic change over from solar system to Hot water Generator and vice versa. Panel should be suitable for 415V, 50 Hz, 3 Phase 4 wire system.  <b>Audio Visual Alarm:</b>  Trip indication lights for low water level &amp; High temp. with audio alarm shall be provided.</p> <p><b>(iv) Controls &amp; Accessories:</b>  100mm dia. Temp Gauge for inlet and outlet water lines.  Pressure Safety valve</p>	

			Auto Air Vent Sockets for Descaling Drain pipe Low water level cutout Master safety thermostat/ sensor for high temperature cutout. Internal Cabling and control wiring with Copper conductor wires etc. Sensor for solar temperature sensing. Solenoid valves for solar system and hot water generator control. (v) Installation and commissioning, service warranty etc.	
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