

BIHAR HORTICULTURE DEVELOPMENT SOCIETY
Directorate of Horticulture | Department of Agriculture | Government of Bihar

REQUEST FOR PROPOSAL (RFP) – SHORT e-TENDER
EMPANELMENT / RATE CONTRACT

**Supply, Testing, Installation, Commissioning and 5-year Comprehensive Maintenance of
Decentralized Solar Cold Storage Systems (<100 MT) in Bihar**

Bihar Horticulture Development Society (BHDS), Directorate of Horticulture, Department of Agriculture, Government of Bihar, invites online bids through the **Bihar e-Procurement Portal** (<https://eproc2.bihar.gov.in/EPSV2Web/>) from eligible agencies for empanelment, rate discovery, supply, testing, installation, commissioning, training, warranty support and comprehensive maintenance of Decentralized Solar Cold Storage Systems of various capacities across Bihar.

The procurement is intended for deployment among **individual farmers, Farmer Producer Organizations (FPOs), Self Help Groups (SHGs), Cooperatives, PACS and production-cluster beneficiaries** under applicable Government schemes.

Particulars	Details
Procurement Portal	https://eproc2.bihar.gov.in/EPSV2Web/
Capacity Categories	2 MT, 5 MT, 10 MT, 20 MT and Modular/Engineered Systems >20 MT and <100 MT
Mode of Selection	QCBS (70:30), Minimum Qualifying Technical Score-70
Empanelment Period	Two Financial Years

Tender Schedule

Sl. No.	Activity	Date & Time
1	Start Date for Downloading Tender Document	09.10.2026
2	Pre-Bid Meeting (Hybrid Mode)	14.10.2026, 1:00 PM, Hybrid, (Link to be shared)
3	Last Date & Time for Bid Submission	27.10.2026, 03:00 PM
4	Technical Bid Opening	27.10.2026, 03:30 PM
5	Technical Presentation	To be intimated to responsive bidders
6	Financial Bid Opening	Only for technically qualified bidders
7	Contact person	Shri Pawan Kumar, Additional Director Horticulture Mobile No.-+91-6201808789

Detailed eligibility criteria, technical specifications, evaluation methodology, financial formats and other conditions are available in the RFP document hosted on the e-Procurement Portal.

BHDS reserves the right to amend, modify, cancel or annul the tender process, wholly or partly, at any stage without assigning any reason thereof.


Mission Director
 State Horticulture Mission, Bihar, Patna

1. Disclaimer and Bidder Instructions

- I. This RFP is not an agreement and does not constitute an offer by BHDS. It is intended to enable eligible bidders to prepare responsive proposals.
- II. The bidder shall bear all costs associated with preparation, submission, presentation, clarification and demonstration of its bid. BHDS shall not reimburse such costs.
- III. The bidder shall study site realities of Bihar, including rural roads, availability of grid power, handling limitations and service accessibility. The quoted rates shall be deemed to include reasonable logistics and installation requirements unless expressly excluded in this RFP.
- IV. Any material deviation from scope, performance specifications, warranty, after-sales service, risk allocation, payment terms, penalty provisions or quality assurance requirements shall render the bid non-responsive.
- V. All documents uploaded must be legible, signed/sealed wherever required and clearly named as per the checklist. Financial details must not be included in the technical bid.
- VI. BHDS may seek clarifications, additional documents or demonstrations. Failure to provide such clarification within the stipulated time may lead to rejection.
- VII. All proposed components must be new, unused, conforming to the approved technical design and traceable to make, model and serial number wherever applicable.
- VIII. The final work order shall be site-specific and capacity-specific. Site readiness and beneficiary consent shall be recorded before dispatch.
- IX. In case of any discrepancy between the portal configuration and the provisions of the RFP, the provisions of the RFP shall prevail.

2. Procurement Objective

The objective is to deploy robust and durable decentralised Solar Cold Storage Systems that are fit for Bihar's production clusters and accessible to small farmers, FPOs, SHGs and other eligible beneficiaries. The procurement must prevent low-quality systems while remaining feasible for competent suppliers to participate in Bihar.

Principle of equivalent or better technology

The technical specifications are minimum performance and durability requirements. Equivalent or superior technologies may be accepted if the bidder demonstrates compliance through datasheets, certifications, design calculations, warranty terms and performance tests. Brand-specific restrictions are not intended.

3. Scope of Work

The selected/empanelled agency shall be responsible for design validation, supply, testing, safe transport, unloading, installation, commissioning and comprehensive maintenance of Solar Cold Storage Systems in Bihar, including beneficiary training and local maintenance ecosystem development.

Work Area	Minimum Scope
Pre-installation	- Site survey and site-readiness checklist - Capacity/application confirmation with beneficiary and BHDS - Site-specific layout, foundation/electrical requirements and heat-load/design confirmation - Submission of component make/model/serial plan and QA dossier
Supply and logistics	- Supply of cold room, PUF/PIR panels, refrigeration unit, TES/PCM, PV modules, structure, controller/MPPT, batteries where applicable, wiring, safety devices and accessories - Packing, forwarding, transit insurance, transport to remote sites, unloading and protection from damage - Geo-tagged dispatch and delivery photographs
Installation and commissioning	- Civil/foundation/PCC platform or base preparation where included in the approved rate - Cold room assembly, refrigeration installation, solar mounting, electrical protections, earthing and safety checks - No-load/partial-load pull-down test, monitoring activation and SAT
Training and handover	- Beneficiary training in Hindi/local language - O&M manual, warranty cards, emergency contact sheet and QR-coded system plate - Training and certification of local youths as Cold Storage Mitras
Post-installation	- Five-year comprehensive warranty and maintenance - Preventive maintenance, breakdown response, component replacement and performance reporting - Remote support/helpdesk and escalation to BHDS

4. Capacity Options and Beneficiary Suitability

Capacity	Indicative Beneficiary	Use Case	Procurement Treatment
2 MT	Individual farmer / small group	Small aggregation, high-value produce, village-level use	Standard schedule applies
5 MT	Farmer group / SHG / small FPO	Cluster-level temporary storage and market timing	Standard schedule applies

Capacity	Indicative Beneficiary	Use Case	Procurement Treatment
10 MT	FPO / SHG federation / cooperative / PACS	Aggregation, grading, dispatch planning	Standard schedule applies; remote monitoring mandatory
20 MT	Larger FPO / cooperative / production cluster	Multiple farmer use and commodity aggregation	Standard schedule applies; stronger service and data reporting
>20 MT and <100 MT	Cluster-level decentralised system	Multiple standard modules or engineered multi-chamber system	Allowed only through approved site-specific design; bidder must show NCCD-compliant heat-load, refrigeration, insulation, TES and solar sizing calculations

Capacity flexibility without quality dilution

Bidders may quote any one or more standard capacities. For systems above 20 MT and below 100 MT, BHDS may either issue work orders as combinations of approved standard modules or approve a site-specific engineered design. Such flexibility increases capacity availability while preventing undersized custom systems.

5. Evaluation Methodology

Stage	Evaluation	Outcome
Stage I	Administrative and Eligibility Evaluation	Pass/Fail. Non-responsive or ineligible bids rejected. Financial information in technical bid leads to rejection.
Stage II	Technical Evaluation and Scoring	Technical Evaluation and Scoring: Technical bids shall be evaluated out of a maximum of 100 marks. Only bidders securing a minimum Technical Score of 70 marks shall qualify for opening of financial bids.
Stage III	Financial Evaluation	QCBS 70:30 among technically qualified bidders. Capacity-wise ranking and rate finalisation.

A bidder may qualify for one or more capacity categories. Qualification in one capacity category shall not automatically qualify the bidder for another category.

Stage I (Pass/Fail)

Criterion	Minimum Requirement	Supporting Documents
Legal status	Company, LLP, partnership, cooperative society, proprietorship or other registered legal entity in India. Bidder may be OEM or OEM-authorized system integrator/dealer/distributor.	Registration certificate, PAN, GST, OEM certificate or manufacturer authorisation.
OEM / technical backing	The bidder shall clearly specify whether it is an OEM or a non-OEM bidder. In case the bidder is an OEM, an OEM declaration/certificate shall be submitted. In case the bidder is a non-OEM bidder, a valid authorization from the OEM of the proposed Solar Cold Storage System and/or Refrigeration System shall be submitted. The authorization shall clearly confirm warranty support, availability of critical spare parts/components, and technical support throughout the contract period.	OEM declaration supported by certificate, In case of non-OEM bidder, a valid authorization from the OEM of the proposed Solar Cold Storage System and/or Refrigeration System
Minimum Three Years of Experience in Solar Cold Storage Installations	The bidder shall have a minimum of three years of experience in the installation and commissioning of solar cold storage systems as of 31 March 2026.	Copies of relevant work orders or contracts, supported by completion certificates, commissioning certificates, invoices with proof of payment, or client certificates, demonstrating a minimum of three years of relevant experience as of 31 March 2026.
Experience - 2 MT / 5 MT (Solar Cold Storage installations)	At least five completed solar cold storage installations, each having a capacity of 2 MT or more, during the last three completed financial years ending on 31 March 2026, including private-sector projects.	Work orders, invoices supported by completion certificates/payment proof
Experience - 10 MT / 20 MT (Solar Cold Storage installations)	At least five completed solar cold storage installations, each having a capacity of 10 MT or more, during the last three completed financial years ending on 31 March 2026 including private-sector projects.	Work orders, invoices supported by completion certificates/payment proof

Criterion	Minimum Requirement	Supporting Documents
Experience - >20 MT and <100 MT (Solar Cold Storage installations)	At least three completed solar cold storage installations, each having a capacity of more than 20 MT and below 100 MT, during the last three completed financial years ending on 31 March 2026 including private-sector projects.	Work orders, invoices supported by completion certificates/payment proof
Turnover	Average annual turnover: minimum Rs. 2 crore for 2/5 MT; Rs. 4 crore for 10/20 MT; Rs. 7.5 crore for >20 MT and <100 MT in last three FY. For authorised integrators, OEM financial strength may be considered only for technical backing, not as substitute for bidder solvency unless specifically permitted by BHDS.	CA certificate with UDIN, audited financials, ITRs.
Quality management	The bidder shall possess a valid ISO 9001:2015 certification relevant to the scope of the proposed work. The ISO 9001:2015 certificate of the authorising OEM shall not be accepted as a substitute for the bidder's certification. Additional relevant ISO certifications held by the bidder are desirable and shall be considered for technical scoring.	Valid ISO 9001:2015 certificate issued in the name of the bidder. For claiming additional marks, valid copies of additional relevant ISO certifications issued in the name of the bidder shall also be submitted.
Solar module compliance	Solar PV modules shall be from the latest MNRE ALMM List-I applicable at the time of supply/installation for Government-supported projects. ALMM cell requirements, if applicable at the time of supply, shall also be complied with.	Declaration at bid stage; final ALMM/module serial compliance dossier at supply.
Service commitment	Bihar service plan with helpdesk, technician deployment and spare-parts arrangement. Existing Bihar service centre is not mandatory at bid stage; successful bidder must operationalise the committed arrangement within 60 days of empanelment or before first commissioning, whichever is earlier.	Service plan, local partner MoU/undertaking, escalation matrix.
Non-blacklisting	Not blacklisted/debarred by Central/State Government, PSU, statutory body or multilateral agency during the last five years for corrupt/fraudulent practices or serious performance failure.	Notarised affidavit/undertaking.
Document Cost	Payment of Tender Document Fee.	Proof of online payment of ₹5,000/- through NEFT/RTGS/online mode.
Earnest Money Deposit (EMD)	Submission of prescribed EMD.	Proof of online payment of ₹1,00,000/- (Rupees One Lakh Only) through NEFT/RTGS/online mode.
Tax and legal compliance	Valid GST registration, PAN and filing compliance as applicable.	1. GST Registration Certificate. 2. GST Returns (GSTR-3B/GSTR-1) for the last three months preceding the bid submission date. 3. PAN.
Presentation	Understanding of BHDS Requirements & Proposed Solution	Power Point Presentation
	Design Methodology, Solar Sizing & TES Approach	
	O&M, Warranty & Service Support Plan	
	Similar Project Experience & Case Studies	
	Team Strength, Deployment Readiness & Q&A	

EMD and Turnover exemptions claimed under the Bihar Purchase Preference Policy, 2024 are admissible only upon submission of documentary evidence establishing the bidder as an Eligible Enterprise of the State of Bihar.

Stage II Technical Scoring – 100 Marks

Technical Evaluation Criteria (100 Marks)

Parameter	Category	Evaluation Criteria	Marks
Experience (Years)	Applicable for all categories	≥ 3 years and < 5 years	10
		≥ 5 years and < 7 years	14
		≥ 7 years and < 10 years	17
		≥ 10 years	20
		Maximum Marks	20
Number of Installations Completed	For 2 MT & 5 MT Categories	5–10 installations of 2 MT or more	10
		11–15 installations of 2 MT or more	14
		16–25 installations of 2 MT or more	17
		More than 25 installations of 2 MT or more	20
	For 10 MT & 20 MT Categories	5–8 installations of 10 MT or more	10
		9–12 installations of 10 MT or more	14
		13–20 installations of 10 MT or more	17
		More than 20 installations of 10 MT or more	20
	For >20 MT and <100 MT Categories	3–4 installations of each having a capacity of more than 20 MT and below 100 MT	10
		5–6 such installations	14
		7–8 such installations	17
		More than 8 such installations	20
		Maximum Marks	20
Average Annual Turnover (Last 3 Financial Years)	For 2 MT & 5 MT Categories	≥ ₹2 Crore and < ₹3 Crore	10
		≥ ₹3 Crore and < ₹4 Crore	14
		≥ ₹4 Crore and < ₹6 Crore	17
		≥ ₹6 Crore	20
	For 10 MT & 20 MT Categories	≥ ₹4 Crore and < ₹5 Crore	10
		≥ ₹5 Crore and < ₹7.5 Crore	14
		≥ ₹7.5 Crore and < ₹10 Crore	17
		≥ ₹10 Crore	20
	For >20 MT and <100 MT Categories	≥ ₹7.5 Crore and < ₹10 Crore	10
		≥ ₹10 Crore and < ₹15 Crore	14
		≥ ₹15 Crore and < ₹20 Crore	17
		≥ ₹20 Crore	20
ISO Certifications	Applicable for all categories	Valid ISO 9001:2015 certification held in the name of the bidder	6
		At least one additional relevant ISO certification held in the name of the bidder	4
		Maximum Marks	10
Technical Presentation	Applicable for all categories	Understanding of BHDS Requirements & Proposed Solution	10
		Design Methodology, Solar Sizing & TES Approach	5
		O&M, Warranty & Service Support Plan	5
		Similar Project Experience & Case Studies	5
		Team Strength, Deployment Readiness & Q&A	5
		Maximum Marks	30
		Total Technical Score	100

Only bidders securing at least 70 marks out of 100 in the Technical Evaluation shall qualify for opening of financial bids. Marks assigned by the Evaluation Committee shall be final subject to applicable procurement rules and processes.

Financial Evaluation - QCBS 70:30

Item	Formula/Rule
Technical Score (TS)	Marks obtained by the bidder out of 100 in the technical evaluation. Only technically qualified bidders shall be considered for financial evaluation.
Weighted Technical Score (WTS)	$WTS = TS \times 0.70$
Financial Score (FS)	$FS = (\text{Lowest valid evaluated price among technically qualified bidders} + \text{Valid evaluated price of the bidder under consideration}) \times 100$
Weighted Financial Score (WFS)	$WFS = FS \times 0.30$
Composite Score	Composite Score = WTS + WFS. The technically qualified bidder obtaining the highest Composite Score shall be ranked H1 for the respective package/schedule.
Tie-break	Higher technical score; if still tied, lower quoted price; if still tied, better service network/past performance as decided by committee.

Capacity-wise Evaluation and Empanelment

- Evaluation shall be carried out separately for each quoted capacity and temperature/TES configuration wherever financial schedules differ.
- BHDS may empanel more than one technically qualified agency for each capacity, subject to rate finalisation, beneficiary interest, geographical coverage and service capability.
- Other technically qualified bidders may be offered empanelment at the approved rate for that capacity/configuration if permitted by the competent authority.
- Work distribution may consider composite ranking, district coverage, past performance, service capability, beneficiary choice, installation load and scheme priorities.
- Abnormally low quotes may be subjected to cost justification and BoQ scrutiny. If the bidder cannot demonstrate compliance with minimum specifications at the quoted rate, BHDS may reject the bid as non-responsive after due process.

7. Minimum Technical Specifications

Applicability

The following are minimum specifications for standard 2 MT, 5 MT, 10 MT and 20 MT Solar Cold Storage Systems. For systems above 20 MT and below 100 MT, the same performance philosophy and per-MT design adequacy shall apply through approved modular or engineered design.

7.1 Performance Requirements

Parameter	2 MT	5 MT	10 MT	20 MT
Baseline performance	Two days of daily pre-cooling of 10% of total storage capacity and maintenance of cold-storage temperature for the balance period primarily on thermal energy storage	Same	Same	Same
Daily pre-cooling capacity	200 kg	500 kg	1,000 kg	2,000 kg
Pre-cooling temperature and duration	From 35-30 deg C to 4 deg C within 24 hours for 4 deg C application; from 35-30 deg C to 1 deg C within 24 hours for 1 deg C application; from 30-25 deg C to -5 deg C within 24 hours for -5 deg C application	Same	Same	Same
Temperature maintenance	4 deg C to 6 deg C up to 48 hours; 1 deg C to 3 deg C up to 48 hours; -5 deg C to -3 deg C up to 48 hours, as per selected application	Same	Same	Same
Default TES autonomy	48 hours. A 24-hour TES option may be quoted separately and used only where BHDS/beneficiary approves based on site power reliability and cost considerations	Same	Same	Same

7.2 Cold Room Body, Insulation and Doors

Parameter	2 MT	5 MT	10 MT	20 MT
External & internal body	PPGI minimum 0.5 mm or SS minimum 0.4 mm	Same	Same	Same
Indicative external dimensions (L x B x H)	8 x 8 x 8 ft	20 x 8 x 8 ft	40 x 8 x 8 ft or 20 x 16 x 8 ft	80 x 8 x 8 ft or 40 x 16 x 8 ft
Minimum internal volume	300 CFT	750 CFT	1,500 CFT	3,000 CFT
Doors	1	1	1-2	1-2
Door opening	Minimum 6 ft height x 2.5 ft width	Same	Same	Same
Insulation - 4 deg C application	100 mm PUF on door/wall/ceiling; 60 mm PUF floor; PUF density 40 +/- 2 kg/m ³	Same	Same	Same
Insulation - 1 deg C application	100 mm PUF on door/wall/ceiling; 70 mm PUF floor;	Same	Same	Same

Parameter	2 MT	5 MT	10 MT	20 MT
Insulation - -5 deg C application	PUF density 40 +/- 2 kg/m ³ 100 mm PUF on door/wall/ceiling; 80 mm PUF floor; PUF density 40 +/- 2 kg/m ³	Same	Same	Same
Heat infiltration control	PVC strip curtain/air curtain or equivalent for door opening; door gasket and latch; internal safety release wherever applicable	Same	Same	Same

7.3 Refrigeration and Thermal Energy Storage

Parameter	2 MT	5 MT	10 MT	20 MT
Cooling system type	Air-cooled vapour compression system with variable-speed compressor	Same	Same	Same
Compressor capacity	1.5 TR	2.5 TR	4.75 TR	8.3 TR
Design conditions	-5 deg C evaporating / 50 deg C condensing for 4 deg C application; -10 deg C evaporating / 50 deg C condensing for 1 deg C application; -15 deg C evaporating / 50 deg C condensing for -5 deg C application	Same	Same	Same
Refrigerant	Zero-ODP HFC refrigerants such as R134a/R407F/R407C or legally permitted equivalent zero-ODP/low-GWP refrigerant subject to safety and OEM design	Same	Same	Same
TES medium	PCM - water or other relevant PCM, compatible with selected temperature range	Same	Same	Same
TES cooling capacity - 48 h autonomy	120 MJ	245 MJ	440 MJ	800 MJ
TES cooling capacity - 24 h autonomy	75 MJ	145 MJ	250 MJ	440 MJ
PCM useful life	Minimum 10 years; replacement protocol and warranty/support to be submitted	Same	Same	Same

7.4 Solar PV, Battery and Controller

Parameter	2 MT	5 MT	10 MT	20 MT
PV module type	Crystalline silicon or thin-film based technology; modules to comply with applicable MNRE ALMM/BIS/IEC requirements	Same	Same	Same

Parameter	2 MT	5 MT	10 MT	20 MT
Minimum solar capacity - 4 deg C	4 kWp	7 kWp	12 kWp	20 kWp
Minimum solar capacity - 1 deg C	4.6 kWp	8 kWp	13.8 kWp	23 kWp
Minimum solar capacity - -5 deg C	5.2 kWp	9 kWp	15.6 kWp	26 kWp
Battery type	Lead acid / Li-ion or superior battery technology compliant with applicable safety standards	Same	Same	Same
Minimum battery capacity	5.2 kWh	7.2 kWh	12 kWh	19.2 kWh
Battery warranty	Minimum 5 years	Same	Same	Same
PV module warranty	Output warranty: at least 90% at 10 years and 80% at 25 years	Same	Same	Same
Mounting structure	Metallic structure of adequate strength, hot dip galvanised minimum 80 micron, designed for wind velocity up to 150 km/h; tilt as per latitude/system design; PV preferably mounted to shade cold room where feasible	Same	Same	Same
Solar controller/MPPT	MPPT with minimum 95% efficiency; IP65 housing/cabinet; protections against open circuit, short circuit, under-voltage, reverse polarity and surges; solar-priority hybrid operation where grid/DG backup is provided	Same	Same	Same

7.5 Monitoring, Controls and Safety

Area	Minimum Requirement
Local monitoring	Digital temperature display, data logging, alarm indication and operating records for all capacities.
Remote monitoring	Remote monitoring mandatory for all capacities. Minimum data: ambient temperature, cold room temperature, RH, compressor run/speed, battery voltage, PV voltage/current, door status, fan status, energy consumption and temperature set point.
Access to data	Beneficiary and BHDS/district nodal officer shall receive monitoring access or monthly exported reports. Passwords/remote credentials shall be handed over at commissioning.
Electrical safety	Proper earthing, MCB/MCCB, surge protection, DC isolator, cable labelling, conduits, lightning protection where required, danger/safety signage and electrical test certificate.
User safety	Internal door release where applicable, anti-skid floor, adequate lighting, ventilation around equipment, fire extinguisher where required and Hindi safety instructions.
Grid/DG backup	Permitted as hybrid backup where available; system should prioritise solar and switch safely to backup when temperature set points cannot be maintained.

7.6 Systems Above 20 MT and Below 100 MT

For cluster-level systems above 20 MT and below 100 MT, bidders may offer either a combination of approved standard modules or an engineered multi-chamber Solar Cold Storage System. BHDS shall approve such systems only after review of the design dossier.

Requirement		Condition for >20 MT and <100 MT
Design dossier	Heat-load calculation, chamber dimensions, commodity/application, insulation selection, refrigeration capacity, TES autonomy, PV sizing, battery/control strategy and layout.	
Performance	Daily pre-cooling of at least 10% of installed capacity and temperature maintenance equivalent to the selected temperature class. Per-MT internal volume and energy/TES adequacy shall not be lower than the standard schedule unless technically justified and approved.	
Service	Dedicated district/cluster service plan, spare parts plan and trained local Cold Storage Mitras.	
Financial quote	Separate quote for standard modular combinations or engineered system; no ambiguous lump-sum quote without capacity, temperature class, TES autonomy and BoQ.	
Approval	Subject to technical review by BHDS/nominated technical agency and site-specific acceptance before work order.	

8. Quality Assurance and Inspection Mechanism

Quality shall be enforced through documents, physical checks, performance tests and beneficiary-facing transparency. The intention is not to create excessive paperwork, but to make every important component traceable and verifiable.

Quality-Check Stage	Minimum Verification
Pre-supply technical dossier	• Make/model/datasheet of refrigeration unit, compressor, condenser/evaporator, PCM/TES, PV modules, controller/MPPT, battery, panels, doors and major accessories • BoQ with capacity-wise quantities • ALMM declaration for PV modules and final module serial list at supply • Warranty undertaking and service escalation matrix
Component quality evidence	• PUF/PIR panel thickness/density certificate • PCM datasheet and quantity declaration • Battery warranty and serial numbers • Compressor/controller warranty documents • Electrical protection and cable specifications
Pre-dispatch check / FAT	• Visual and dimensional inspection • Refrigeration leak/pressure test evidence • Controller/MPPT operation test • Cold room panel condition and packing verification • Video FAT may be accepted for small systems; random/third-party FAT may be ordered by BHDS for larger batches
Delivery inspection	• Geo-tagged delivery photographs • Transit damage checklist • Matching of serial numbers with approved dossier • Damaged material to be replaced at bidder cost before commissioning
Site Acceptance Test (SAT)	• Temperature pull-down and hold test as per application • Solar/hybrid operation check • Battery/controller/protection check • Remote/data logging activation • Beneficiary training and handover record
Post-commissioning performance	• 30-day performance review using data logs/beneficiary records • Corrective action if temperature or uptime requirements are not met • Final payment/retention release linked to successful performance confirmation as per payment terms

8.1 Substitution Control

- The bidder shall not substitute approved make/model/specification after technical evaluation without written approval of BHDS.
- Any substitute must be equal or superior in capacity, safety, efficiency, warranty and compliance. Cost escalation shall not be admissible for bidder-initiated substitution.
- Use of non-ALMM PV modules, undersized PV/TES/battery, lower insulation thickness/density, thinner sheets, inferior controller or non-traceable compressor shall be treated as material breach.

9. Transport, Installation and Site Commissioning

Aspect	RFP Requirement
Transit risk	All risks during packing, transport, unloading and handling remain with the bidder until successful delivery inspection and SAT. Transit insurance is mandatory and included in quoted price.
Remote location logistics	Bidder shall include reasonable rural logistics in price. For sites without motorable access or with abnormal conditions, bidder shall report within 5 working days of site survey for BHDS/beneficiary decision before dispatch.
Site readiness	Beneficiary/BHDS shall provide land/space, access and basic site clearance. Bidder shall provide site readiness checklist and shall not dispatch until site readiness is confirmed, unless directed by BHDS.
Installation quality	System shall be installed plumb, level, sealed, weather-protected and electrically safe. Foundation/PCC/base works included in approved scope shall be completed before commissioning.
Commissioning documents	Commissioning report, SAT checklist, photographs, data-login credentials, warranty cards, O&M manual, service contacts and beneficiary acceptance certificate.

10. Implementation Schedule

Milestone	Timeline
Site survey after work order/site allocation	Within 10 working days
Site-specific design/layout submission	Within 7 working days after site survey

Milestone	Timeline
Supply and installation - 2/5/10/20 MT	Normally within 45-60 days after site readiness and work order; remote/large batches may be scheduled with BHDS approval
Supply and installation - >20 MT and <100 MT	Normally within 75-90 days after approval of engineered design and site readiness
Commissioning/SAT intimation	At least 3 working days before proposed SAT
Defect rectification after SAT observations	Within 7 working days for minor defects; within 15 working days for major defects unless component import/OEM delay is documented
Local youth training	Before or within 15 days of commissioning; refresher within first six months for cluster installations

Supply constraint clause

Supply-chain delays for ALMM modules, batteries, compressors or controllers must be reported with OEM evidence before the contractual deadline. BHDS may grant reasonable extension where delay is not attributable to the bidder and site/beneficiary interest is protected. Repeated inability to supply despite accepted work orders may lead to reduced allocation, encashment of security or de-empanelment.

11. After-Sales Service, Warranty and Maintenance

The bidder shall provide comprehensive maintenance for five years after commissioning. The quoted rate shall include labour, preventive maintenance, remote support, consumables normally required for maintenance, and replacement/repair of defective components covered under warranty/CMC, except damage due to beneficiary misuse, theft, flood or force majeure proven by the bidder.

Service Activity	Timeline / Requirement
Complaint acknowledgement	Within 24 hours by phone/SMS/WhatsApp/email/helpdesk
Remote troubleshooting	Within 24 hours of complaint registration
Site visit	Within 72 hours for accessible sites; up to 96 hours for notified remote/difficult-access sites
Temporary restoration / workaround	Within 5 days where feasible for cooling-critical faults
Major repair	Within 15 days
Major component replacement	Within 30 days, unless OEM supply delay is documented and interim mitigation is provided
Preventive maintenance	At least once every quarter for 10 MT and above; at least once every six months for 2/5 MT; additional visits before peak season where required
Annual performance report	To beneficiary and BHDS/district office, including service history, uptime, major failures and corrective action

11.1 Minimum Service Infrastructure

- Successful bidder shall establish or appoint a Bihar service support arrangement within 60 days of empanelment or before first commissioning, whichever is earlier.
- Existing Bihar service centre/dedicated technical team shall receive technical marks but shall not be a hard disqualification for otherwise capable firms at bid stage.
- Critical spares or access to critical spares must be demonstrated for sensors, controllers, fans, door gaskets/curtains, relays/contactors, fuses/MCBs, communication devices and battery accessories. Compressor/refrigeration spare logistics shall be described.
- A helpdesk number, escalation officer and district-wise technician/contact list shall be printed on the system plate and O&M manual.

12. Beneficiary Protection and Transparency Safeguards

Safeguard	Requirement
No extra charges	Empanelled agency shall not demand any amount from farmers/FPOs/SHGs beyond the approved beneficiary contribution and approved site-specific extras, if any, recorded in writing by BHDS.
Beneficiary disclosure sheet	Before installation, bidder shall provide a one-page Hindi/English sheet showing approved capacity, temperature class, TES option, price, inclusions/exclusions, warranty, service contact and complaint escalation.
QR-coded system plate	Each system shall carry a durable plate with capacity, temperature class, serial number, date of commissioning, warranty period, vendor helpline, BHDS/district helpline and QR code linking to warranty/service information where feasible.
Acceptance only after demonstration	Beneficiary acceptance shall be valid only after live demonstration of operation, temperature display, basic maintenance and complaint registration process.



Safeguard	Requirement
Grievance escalation	Unresolved complaints beyond SLA may be escalated to district horticulture officer/BHDS nodal officer. Repeated complaints may trigger inspection and reduced work allocation.
Random audit	BHDS/nominated agency may conduct random quality and beneficiary feedback audits. Failure in audit may lead to rectification order, penalty or de-empanelment.

13. Price, Payment, Security and Penalties

13.1 Quoted Price

- Rates shall be quoted capacity-wise and temperature/TES option-wise in Indian Rupees, inclusive of GST, duties, packing, forwarding, freight, transit insurance, unloading, installation, commissioning, safety protections, remote/data logging where required, warranty, comprehensive maintenance for five years and mandatory training.
- Separate quote rows shall be provided for 4 deg C, 1 deg C and -5 deg C applications and for 24-hour/48-hour TES options where both are offered. BHDS may choose the applicable variant based on scheme/site requirement.
- No escalation shall be payable for work orders already accepted, except statutory tax changes or other adjustments specifically permitted Government rules.
- Site-specific non-standard work, if any, must be approved in writing before execution. No post-facto claims shall be entertained from beneficiaries or BHDS.

13.2 Payment Milestones

Gate	Condition
Delivery	Payment/subsidy recommendation only after verified delivery of undamaged materials at site, matching approved component dossier and geo-tagged inspection record.
Commissioning	Payment/subsidy recommendation after installation, SAT, training, handover of documents and joint inspection certificate.
Performance	BHDS may retain/withhold a small portion or require O&M security until 30-day performance confirmation, especially for 10 MT and above or remote sites.
Beneficiary contribution	Beneficiary contribution and credit-linked subsidy shall follow applicable scheme guidelines and bank/Government procedures. This RFP does not alter scheme subsidy rules.

13.3 Performance Security and O&M Security

The successful agency shall submit performance security as configured in BHDS work order, recommended at 5% of work order value. To safeguard after-sales service without overburdening suppliers, BHDS may release a major portion after successful commissioning and retain/renew a limited O&M security portion for the warranty/CMC period as per competent authority approval.

- Security may be forfeited for non-performance, refusal to honour warranty, repeated SLA failure, supply of inferior/non-compliant materials or abandonment of work.
- Security shall not be forfeited for delays attributable to site non-readiness, force majeure or documented delays approved by BHDS.
- O&M security/retention should be proportionate and shall be clearly reflected in the bid/work order to avoid uncertainty.

14. BHDS Responsibilities and Rights

14.1 Responsibilities to Enable Timely Deployment

- Provide beneficiary/site details, district nodal contacts and applicable scheme instructions as early as possible after work order.
- Facilitate site readiness confirmation and joint inspection within reasonable timelines.
- Avoid additional non-standard documentation not specified in this RFP unless required by law or scheme rules.
- Maintain grievance and performance records for objective work allocation and service monitoring.

14.2 Rights

- Increase/decrease quantities or distribute work among empanelled agencies based on scheme demand, service capability, past performance, district coverage and beneficiary preference.
- Reject any bid for non-responsiveness, false information, material deviation, non-compliant technical proposal or conflict with applicable rules.
- Conduct technical presentations, demonstrations, site inspections, third-party audits and beneficiary feedback checks.
- Withhold payment/subsidy recommendation until quality gates, commissioning and training requirements are completed.
- Suspend or de-empanel agencies for repeated delays, poor quality, poor after-sales service, farmer overcharging or failure to honour warranty/CMC obligations.

15. Disqualification, Integrity and Dispute Resolution

- Late, incomplete, conditional or materially non-responsive bids shall be rejected.
- False or misleading information, forged documents, canvassing, collusion, conflict of interest or attempt to influence evaluation shall lead to disqualification and further action.

- Any change in mandatory annexure formats that alters substance may lead to rejection.
- Disputes shall first be attempted to be resolved amicably through BHDS. Failing resolution, jurisdiction shall lie with competent courts/authorities at Patna, Bihar, subject to applicable dispute resolution mechanisms.
- Force majeure events shall be handled as per applicable contract terms. The bidder must notify BHDS promptly with documentary evidence and mitigation plan.

16. De-Empanelment Triggers

BHDS may suspend or de-empanel agencies in case of:

- Submission of false documents
- Failure to honour warranty obligations
- Repeated SLA violations
- Supply of non-compliant equipment
- Overcharging beneficiaries
- Blacklisting by Government agencies during contract period

17. Price Validity

- Rates finalized under the empanelment shall remain valid during the rate-contract period unless revised under applicable Government provisions.



ANNEXURES

Instructions

All annexures shall be uploaded in the technical bid unless specifically marked as financial. Documents must be signed by the authorised signatory. Financial rates shall be uploaded only in the financial bid section

Annexure I - Technical Proposal Letter

[On Bidder Letterhead]

To,
The Mission Director, Bihar Horticulture Development Society,
Directorate of Horticulture, Department of Agriculture, Government of Bihar,
2nd Floor, Krishi Bhawan, Mithapur, Patna – 800001

Subject: Technical Proposal for Supply, Testing, Installation, Commissioning and 5-year Comprehensive Maintenance of Decentralised Solar Cold Storage Systems (<100 MT) in Bihar

Sir/Madam,

In accordance with the RFP, we submit our technical proposal and confirm that we have read, understood and accepted all terms, specifications, quality assurance requirements, service obligations, training obligations and beneficiary safeguards. We certify that the information submitted is true and correct and that no financial price has been disclosed in the technical bid.

Signature of Authorised Signatory

Name

Designation

Seal

Date

Annexure II - Proposer Information Sheet

Particular	Response
Name of bidder	[•]
Legal status	Company / LLP / Partnership / Cooperative / Proprietorship / Other
OEM or authorised integrator	OEM / Authorised System Integrator / Dealer / Distributor
Registered address	[•]
Bihar office/service address, if any	[•]
GSTIN- GSTIN Bihar- GSTIN Bihar if not available, it must be submitted within 15 days after issuing LOA)	[•]
PAN	[•]
Authorised signatory	[•]
Nodal contact for this bid	[• mobile/email]

Capacity	Temperature Class	TES Option	Specific Tender Category Applied For (Please indicate "Yes" or "No" against the applicable category)
2 MT	4 deg C	24 hr	
		48 hr	
2 MT	1 deg C	24 hr	
		48 hr	
2 MT	-5 deg C	24 hr	
		48 hr	
5 MT	4 deg C	24 hr	
		48 hr	
5 MT	1 deg C	24 hr	
		48 hr	
5 MT	-5 deg C	24 hr	
		48 hr	
10 MT	4 deg C	24 hr	
		48 hr	
10 MT	1 deg C	24 hr	
		48 hr	
10 MT	-5 deg C	24 hr	
		48 hr	
20 MT	4 deg C	24 hr	
		48 hr	
20 MT	1 deg C	24 hr	
		48 hr	
20 MT	-5 deg C	24 hr	
		48 hr	
>20 MT and <100 MT modular/engineered	As specified	24 hr	
		48 hr	

Annexure III - Technical Bid Checklist

S. No.	Document	Status	Page No.
1	Technical proposal letter	Yes/No	Page
2	Proposer information sheet	Yes/No	Page
3	Registration certificate, PAN, GST	Yes/No	Page
4	OEM certificate / manufacturer authorisation	Yes/No	Page
5	Experience documents - work orders, invoices, payment/completion proof	Yes/No	Page
6	Turnover certificate with UDIN and audited financials/ITRs	Yes/No	Page
7	ISO 9001 or equivalent quality certification of bidder/OEM	Yes/No	Page
8	Technical compliance sheet with make/model/BoQ	Yes/No	Page
9	ALMM declaration and PV module compliance undertaking	Yes/No	Page
10	Service support plan for Bihar and local youth training plan	Yes/No	Page
11	QA/inspection plan and supply-chain availability declaration	Yes/No	Page
12	Non-blacklisting and no-overcharging affidavit	Yes/No	Page
13	Product catalogue/literature	Yes/No	Page
14	Any other document	Yes/No	Page
15	EMD and Tender Fee Payment Proof	Yes/No	Page

Annexure IV - Work Experience Format

S. No.	Client / Work Order Issuing Agency	Project Description & Capacity	Date	Value (Rs.)	Completion Proof (Work order/Purchase order/invoice must supported by Completion Certificate/ payment Proof.
1					
2					
3					
4					
5					



Annexure V - Average Annual Turnover

Financial Year	Annual Turnover (Rs. crore)
FY 2023-24	
FY 2024-25	
FY 2025-26	
Average	

Certified that the average annual turnover of [Name of Firm] for the above financial years is Rs. [●] crore.

Name and seal of Chartered Accountant with UDIN: [●]

Signature of Authorised Signatory

Name

Designation

Seal

Date



Annexure VI - Non-Blacklisting, Compliance and No-Overcharging Affidavit

[On Rs. 100 non-judicial stamp paper as applicable]

I/We, [Name of Bidder], having registered office at [address], hereby declare that we have not been blacklisted/debarred by any Central Government, State Government, PSU, statutory authority or multilateral agency during the last five years. We further confirm that all materials supplied shall conform to the RFP specifications and approved technical proposal. We shall not demand or collect any unauthorised amount from any farmer/FPO/SHG/beneficiary beyond the approved contribution and approved site-specific charges, if any. We understand that any false statement may lead to rejection, forfeiture, de-empowerment, blacklisting and legal action.

Signature of Authorised Signatory

Name

Designation

Seal

Date



Annexure VII - OEM Authorisation and Warranty Support

[On OEM Letterhead]

We, [OEM name], authorise [bidder name] to offer, install, commission and maintain Solar Cold Storage Systems/relevant components under the Bid issued by BHDS. We confirm technical support, warranty support, spare-parts support and component authenticity for the offered systems/components for the warranty/CMC period as per RFP terms.

Signature of OEM Authorised Signatory

Name

Designation

Seal

Date



Annexure VIII - ALMM and Solar Module Declaration

We declare that solar PV modules proposed/supplied under this bid shall be from the latest applicable MNRE ALMM List-I at the time of supply/installation for Government-supported projects. We shall provide module make, model, wattage, serial numbers and supporting documents before payment/SAT. We shall comply with ALMM cell requirements if applicable at the time of supply.

Signature of Authorised Signatory

Name

Designation

Seal

Date



Annexure IX - Technical Compliance Sheet

For each cold storage system proposed with a capacity above 20 MT and below 100 MT, the bidder shall submit a separate Technical Compliance Sheet specifying the applicable capacity, temperature parameters and TES configuration.

Item	Minimum Requirement
Capacity	
Temperature application	
TES autonomy	
Internal volume	
Panel material/thickness	
Insulation thickness/density	
Compressor make/model/TR	
Refrigerant	
PCM/TES make/quantity/capacity	
Solar PV make/model/kWp	
Battery type/capacity	
Controller/MPPT	
Mounting structure	
Monitoring	
Warranty	

Annexure X - Financial Proposal Format

Financial bid warning

Do not include prices in the technical bid.

Capacity	Temperature Class	TES Option	Unit	Unit Price (in INR) inclusive of all taxes
2 MT	4 deg C	24 hr	1	
		48 hr	1	
2 MT	1 deg C	24 hr	1	
		48 hr	1	
2 MT	-5 deg C	24 hr	1	
		48 hr	1	
5 MT	4 deg C	24 hr	1	
		48 hr	1	
5 MT	1 deg C	24 hr	1	
		48 hr	1	
5 MT	-5 deg C	24 hr	1	
		48 hr	1	
10 MT	4 deg C	24 hr	1	
		48 hr	1	
10 MT	1 deg C	24 hr	1	
		48 hr	1	
10 MT	-5 deg C	24 hr	1	
		48 hr	1	
20 MT	4 deg C	24 hr	1	
		48 hr	1	
20 MT	1 deg C	24 hr	1	
		48 hr	1	
20 MT	-5 deg C	24 hr	1	
		48 hr	1	
>20 MT and <100 MT modular/engineered	As specified Attach BOQ	24 hr	Per system/MT	
		48 hr	Per system/MT	

Quoted rates shall include all scope items, taxes, logistics, installation, commissioning, five-year comprehensive maintenance and mandatory training. Multiple price quotes for the same configuration shall not be permitted.

Signature of Authorised Signatory

Name

Designation

Seal

Date

Annexures- (Not required to submit along with technical proposal)



Annexure i - QA and Inspection Plan Undertaking

QA Requirement	Bidder Confirmation
Component dossier before supply	Yes / No
FAT/video inspection readiness	Yes / No
Transit insurance included	Yes / No
Geo-tagged dispatch/delivery photos	Yes / No
SAT checklist and 30-day performance review	Yes / No
Remote/data logging access to BHDS/beneficiary	Yes / No
Warranty cards and O&M manual in Hindi/English	Yes / No

Signature of Authorised Signatory

Name

Designation

Seal

Date



Annexure-ii - Site Readiness Checklist

Item	Status	Remarks
Land/space available and accessible	Yes/No	
Approach road suitable for delivery vehicle or alternate unloading plan	Yes/No	
Level PCC/base/foundation available or included in work order	Yes/No	
Solar shadow-free area available	Yes/No	
Grid/DG backup available if specified	Yes/No	
Waterlogging/flood risk assessed	Yes/No	
Beneficiary contact and consent confirmed	Yes/No	
Security/fencing/lock arrangement planned	Yes/No	

Signature of Authorised Signatory

Name

Designation

Seal

Date



Annexure-iii - Installation, Commissioning and SAT Certificate

Particular	Details
Beneficiary / FPO / SHG name	
District / Block / Village / GPS	
Capacity and temperature class	
Date of delivery	
Date of commissioning	
No damage / defects observed	Yes / No / Remarks
Temperature pull-down demonstrated	Yes / No / Readings
Solar/controller/battery operation demonstrated	Yes / No / Remarks
Remote/data logging activated	Yes / No / Login provided
Training completed	Yes / No
Documents handed over	Warranty cards / manuals / service contacts / QR plate
Joint inspection result	Accepted / Accepted with observations / Rejected

Signatures: Beneficiary | Bidder Engineer | District Horticulture Officer / Joint Inspection Team | Date

Annexure iv - Beneficiary Acceptance and Disclosure Certificate

I/We certify that the Solar Cold Storage System of capacity [●] MT has been installed and demonstrated. We have received the price/warranty/service disclosure sheet, O&M manual, service contact and training. We understand that no unauthorised extra payment is payable to the supplier.

Signature/Thumb impression of Beneficiary

FPO/SHG

Representative

Name

Mobile

Date



Annexure v - Cold Storage Mitra Training Certificate

S. No.	Name of Trainee	Village/Organisation	Mobile	Training Date/Signature
1				
2				
3				
4				
5				

Training modules covered: Operation; cleaning and preventive care; temperature records; solar panel cleaning; battery and electrical safety; alarm reporting; complaint registration; restrictions on sealed refrigeration work.

Signature of Authorised Signatory

Name

Designation

Seal

Date

