

Tender Ref. No. : SRI/Tender/MSD-2025/1

Tender Document

**For
Supply of Equipment
Under
Department of Science & Technology Sponsored
Project**



**Shriram Institute for Industrial Research
19, University Road Delhi-110007**

**Tel No. -011-35200445
Fax: - 011-35200455
Email: mktg@shriraminstitute.org
Website: www.shriraminstitute.org**

NOTICE INVITING TENDER

Shriram Institute for Industrial Research (SRI) 19, University Road, Delhi invites Tender, in two bid system to be submitted separately through Email as below -

Technical Bid: mktg@shriram institute.org

Financial Bid: mktg@shriram institute.org

from eligible Indian Equipment Manufacturers for the Supply, Installation and Training at site for the equipment 1) Supercritical fluid extraction system and 2) Twin shaft shredder, at Shriram Institute for Industrial Research (SRI) 19, University Road, Delhi under the project entitled "Development of a Process for Recovering Different Components of End-of-Life Solar Panels" sponsored by Department of Science & Technology (DST), Ministry of Science & Technology, Government of India.

Both Technical & Financial Bid should be submitted in pdf format. The Financial bid should be password protected. Only successful technical bidders will be asked to share the password of financial bid, before opening of financial bids.

The details are summarized below:-

1.	Tender Number	SRI/Tender/MSD-2025/1
2.	Tender Inviting Authority	Dr. Mukul Das, Director Shriram Institute for Industrial Research, 19, University Road, Delhi 110007 For Technical Queries: Email: arti@shriram institute.org , mkumar@shriram institute.org Mobile Number: 7838975044, 9971862285
2.	Purchaser	Shriram Institute for Industrial Research, Delhi.
3.	Usage of Equipment	The purchaser would use equipment for recycling of End-of-Life solar panel for recovering its various components
4.	Scope of Tender	Supply, Installation and Training of equipment.
5.	Locations of Supplies	The equipment is to be supplied at Shriram Institute for Industrial Research, 19, University Road, Delhi 110007
6.	Specification/ Details of Equipment	The detailed specifications of equipment are specified in Tender and placed at Annexure-A
7.	Web page for Details of Tender	www.shriram institute.org The prospective bidders are advised to remain in touch with the website for any update in respect to this Tender.
8.	Start Date for Submission of Tender	Tender submission will start from December 8, 2025 at 15.00 hours
9.	Last Date for Submission of Tender	Tender must be submitted on or before December 22, 2025 up to 17.00 hours. Late bids will be rejected
10	Date of Opening of Technical Bid	The technical bid for the Tender shall be opened on December 23, 2025 at 16:00 hours at the address as under: Shriram Institute for Industrial

		Research, 19, University Road, Delhi
11	Date of Opening of Financial Bid	The date for opening Financial Bid will be intimated to the technically qualified bidders separately
12	Validity of the Tender	Validity of the offers submitted shall be 3 months from the date of opening of the Financial Bid

INSTRUCTIONS TO THE TENDERERS

The Tender shall be submitted in accordance with these instructions, as under:

1. Abbreviations:

Throughout this tender documents", the word/ term:

- a) **"SRI"** means Shriram Institute for Industrial Research
- b) **"Day"** means Calendar day
- c) **"Working day"** means Monday to Friday in week
- d) **"Tender"** means tender number SRI/Tender/MSD-2023
- e) **"Equipment"** means the equipment including all associated tools/jigs/ fixtures/motors/controllers/software/ control panels/accessories as detailed in Annexure-A
- f) **"Purchaser"** means Shriram Institute for Industrial Research
- g) **"Bid"** means the document and financial details submitted by Bidder
- h) **"Bidder"** means the eligible and Indian Equipment Manufacturers
- i) **"Tenderer"** means the eligible and Indian Equipment Manufacturers

2. Eligibility Criteria:

- a) The intending Bidder, in case of Indian Equipment Manufacturers shall submit a self-declaration on their letter- head, along with the Technical Bid, confirming that they are regular in manufacturing & supplying the similar equipment, as asked in this tender, for the last five (5) years.

3. Location of Supplies: Purchaser will take delivery of equipment at Shriram Institute for Industrial Research, 19, University Road, Delhi 110007

4. Scope of Supplies:

- a) The equipment shall be supplied in compliance to the specifications mentioned in Annexure A of the Tender.
- b) The bidder shall apply for both the equipment as mentioned in Annexure A
- c) After the supply of equipment as mentioned in the Annexure A, the Bidder has to execute its installation & training for its operation at the designated location at Shriram Institute for Industrial research, Delhi
- d) The awarded Bidder shall have to depute expert(s) for installation & training at site as and when instructed by SRI. No additional charges shall be payable by SRI, for installation and training of equipment at Shriram Institute for Industrial research, Delhi
- e) The supplier will be required to train the local operators, as decided by SRI for at least 5 days during installation.
- f) Training should cover the equipment's operations, maintenance, information about Do's & Don'ts as well as trouble shooting & all other areas which are necessary for smooth functioning of equipment shall be provided to at least two persons designated by purchaser, at site, by the bidder.

5. Delivery

- a) The purchaser interested for complete delivery of equipment by the bidder within sixty (60) calendar days from the date of issue of supply order. However, the bidders have an option to submit the best delivery time before 60 days. Under any circumstances, delivery should not be made without receipt of delivery instructions from SRI.
- b) The equipment shall be inspected at works by the purchaser and bidder shall be responsible for any damage during the transit of equipment to place of delivery as given in delivery instructions.

6. Warranty/After Sales Services

- a) The equipment shall be warranted for any manufacturing defect for a period of 12 months from the date of successful completion of installation at site.
- b) Should any part or parts fail or proved defective within the period specified above, owing to defect in design, material or workmanship, the supplier will have to replace them at the place of installation free of all charges.
- c) During the warranty period, expert(s) shall be deputed at site by the awarded Bidder whenever found essential and which cannot be undertaken locally or by the SRI experts including rectifying any defect / malfunctioning of plant & equipment. The cost of deputation of expert(s) and any other associated expenditure shall be borne by the awarded Bidder.

7. Manuals and Technical Documents:

The awarded Bidder shall provide technical documents like installation manual, operation and maintenance manual etc.

8. Tender Documents:

Tender document is free of cost and can be downloaded from our website **www.shriraminstitute.org** from 8th **December, 2025 to 22nd December, 2025**. The prospective bidders are advised to remain in touch with the website for any update in respect of this Tender.

9. Submission of Tender:

Technical and financial documents shall be downloaded from the website www.shriraminstitute.org.

All the columns of the Annexures for the given tender shall be duly, properly and exhaustively filled in the format.

Two separate bid should be submitted through email.

- Technical Bid mktg@shriraminstitute.org
- Financial Bid mktg@shriraminstitute.org

10. Financial Bid Submission:

Bidder shall take into account of all costs including Packing, Freight to Shriram Institute for Industrial Research, Delhi, insurance, installation and training cost in the Financial Bid. The bidder shall be responsible for any loss/ damage to material during transportation to the designated location.

11. Last Date for Submission of Tender: 22nd December, 2025

12. Opening of Technical Bid:

The Technical Bid of Tender will be opened at Shriram Institute for Industrial Research 19, University Road, Delhi on 23th December 2025 at 16:00.

13. Opening of Financial Bid:

The Financial Bid of only technically qualified bidders will be opened on the stipulated due date. The date & time for opening of Financial Bid shall be intimated to the technically qualified bidders through email, after the evaluation of Technical Bid.

14. Validity of Tender:

The Tender shall be valid for a period of 60 days from the date of opening of the Technical Bid of Tender. Terms and financial details submitted in the bid shall be treated as firm during the said period of 60 days.

15. Pre-dispatch Inspection:

A pre-dispatch inspection by technical team of purchaser may be carried out at bidder's site of manufacturing equipment.

16. Delivery Time:

- a) The Bidder shall indicate the period within which the ordered quantity will be supplied.
- b) The awarded Bidder shall, within a week from the date of receipt of communication of acceptance of quotes from purchaser shall intimate his acceptance of the order. The awarded bidder shall complete supplies strictly as per the accepted delivery period.

17. Payment terms:

1. The first 50% payment along with purchase order.
2. The 30% payment of total bill will be made by the purchaser after inspection of the equipment before dispatch at Bidder's site by crossed account payee cheque/RTGS/NEFT on submission of Signed Financial Invoice (two copies) certifying that the goods are exactly as per the purchase order and the specification quoted. .
3. Balance 20% order value shall be released after successful installation of equipment at site and successful trial and training.
4. **Invoicing:** All bills should be raised on the name of Shriram institute for Industrial Research, Delhi, GST No. 07AAATS0867K1Z7

18. General Conditions of Contract:

RIGHT OF OWNER TO ACCEPT OR REJECT TENDER

- a) The right to accept the tender will rest with the Owner. The Owner, however, does not bind itself to accept the lowest tender, and reserves to itself the authority to reject any or all the tenders received without assigning any reason whatsoever.
- b) Tenders in which any of the particulars and prescribed information are missing or are incomplete in any respect and/or the prescribed conditions are not fulfilled are liable to be rejected.

RIGHT OF OWNER TO DETERMINE / TERMINATE CONTRACT

a) Owner shall, at any time be entitled to determine and terminate the contract, if in the opinion of the Owner the cessation of the work becomes necessary owing to paucity of funds or for any other cause whatsoever, in which case, the cost of approved materials at the site at current market rates as verified and approved by SRI and of the value of the work done to date by the contractor shall be paid for in full at the rates specified in the contract.

OPERATION OF CONTRACT: Regardless of the place of contracting, place of performance or otherwise, this Agreement, and all amendments, modifications, alterations, or supplements, thereto shall be governed by the laws of India and respective state laws for the nature, validity and interpretation thereof.

EXECUTION OF WORKS: All the works shall be executed in strict conformity with the provisions of the contract documents and with such explanatory detailed drawings, specifications, and instructions as may be furnished from time to time to the contractor by the SRI whether mentioned in the contract or not.

19. SPECIAL CONDITIONS OF CONTRACTS (SCC):

Force Majeure

- **Circumstances leading to force majeure**

- (a) Act of terrorism;
- (b) Riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or

not), civil war, rebellion, revolution, insurrection of military or usurped power;

(c) Ionizing radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;

(d) Epidemics, earthquakes, flood, fire, hurricanes, typhoons or other physical natural disaster, but excluding weather conditions regardless of severity; and

(e) Freight embargoes, strikes at national or state-wide level or industrial disputes at a national or state- wide level in any country where Works are performed, and which affect an essential portion of the Works but excluding any industrial dispute which is specific to the performance of the Works or the Contract.

For the avoidance of doubt, inclement weather, third party breach, delay in supply of materials (other than due to a nationwide transporters' strike) or financial hardship shall not constitute a Force Majeure event.

Notification of Force Majeure:

Contractor shall notify within [10(ten)] days of becoming aware of or the date it ought to have become aware of the occurrence of an event of Force Majeure giving full particulars of the event of Force Majeure and the reasons for the event of Force Majeure preventing the Affected Party from, or delaying the Affected Party in performing its obligations under the Contract.

Payment in case of termination due to Force Majeure:

The Contract Price attributable to the Works performed as at the date of the commencement of the relevant event of Force Majeure. The Contractor has no entitlement and Owner has no liability for: a) Any costs, losses, expenses, damages or the payment of any part of the Contract Price during an event of Force Majeure; and b) Any delay costs in any way incurred by the Contractor due to an event of Force Majeure. Time extension for such cases will be worked out appropriately.

20. Jurisdiction:

In the event of any dispute the legal matter shall be subjected to the jurisdiction of Delhi Court only.

We confirm with our acceptance to the instructions (S.No-1 to 20 above) as given above.

BIDDER'S NAME & SIGNATURE WITH SEAL

ANNEXURE-A

Technical Specifications of Equipment Required:

Equipment 1: Supercritical Fluid Extraction System

S.No	Components/Spares/Accessories/Parts	Quantity	Parameters	Requirements
1	Extractor with internal Basket for feeding the material Gaskets withstanding very high pressure and temperature	1 No.	Capacity (Volume)	2.5 L
			Working pressure, Bar	400
			Design pressure, Bar	450
			Working temperature, °C	120
			Design temperature, °C	150
			MOC	SS316
2	Separator Gaskets withstanding very high pressure and temperature	1 No	Capacity (Volume)	1 L
			Working pressure, Bar	150
			Design pressure, Bar	165
			Design Temperature, °C	100
			MOC	SS316
3	CO ₂ Storage Tank With CO ₂ Recycling and circulation System. Gaskets withstanding very high pressure and temperature	1 No	Capacity (Volume)	15L
			Real Time Monitoring of CO ₂ level	
			CO ₂ Shall be stored in the CO ₂ tank after completion of batch with no impurities.	
			No Loss of CO ₂ during Extraction Process	
			MOC	SS316
4	CO ₂ Condenser	1 No	Design Pressure, Bar	80
			Cooling Medium	Chilled brine
			MOC	SS316
5	Super Cooler	1 No	MAWP, Bar	80
			Cooling Medium	Chilled brine
			MOC	SS316
6	Preheater	1 No	Design Pressure, Bar	450
			Design Temperature, °C	150
			Heating Medium	Electric
			MOC	SS316
7	CO ₂ Pressurizing System	1 No	Maximum pressure, Bar	400
			Flow rate	40kg/hr
			Electronic pressure monitoring & control	
			Built in overpressure protection & relief	
			MOC, parts in contact with	SS316

			CO ₂	
8	Co-Solvent System to match CO2 flow rate	1 No	System that prevents backflow	
			MOC	SS316
			Design Pressure	450
9	Valves/High pressure fitting/ Fitting/Gaskets	-	MOC High Quality	SS316
10	Skid Mounted Movable Structure		MOC	SS304
11	PLC Module with proven SCADA software			

Equipment 2: Twin Shaft Shredder

S.No	Components/Spares/Accessories/Parts	Quantity	Parameters	Requirements
1	Twin Shaft Shredder for shredding solar panel	1 No.	Input Size	6*6inch
			output	5kg/hr
			Output size	<2mm
			MOC	SS304

ANNEXURE-B

FORMAT & REQUIREMENTS FOR SUBMITTING TECHNICAL BID

1. **Tender Ref. No:** SRI/Tender/MSD-2025/1
2. **Name of Bidder:**
3. **Complete office address of Bidder:**
4. **Confirmation of acceptance of Technical Specifications for the supply of equipment:**

Sl. No.	Tender requirements	Quantity	Compliance (Yes/No)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			

5. PAN of bidder (self-attested copy to be enclosed)
6. VAT/ CST/ TIN / GST registration number of bidder (self-attested copy to be enclosed)
.....
7. Delivery period after receipt of supply order from purchaser
8. Copies of purchase orders or contracts or invoices of similar nature or client list in the last five years.
9. The Bidders shall furnish complete Technical details of equipment/ equipment/ material for the equipment offered to supply through the participation of this tender (use separate sheet, if required, to elaborate the details of technical specifications)
10. Technical Literature of equipment with particular reference to the model of equipment proposed to supply against this tender along with reference of website to assess the further features, if required.

I/We as bidder certify that:

- a. The tender shall remain valid for acceptance for 60 days from the date of opening the Technical Bid of the tender.
- b. Agree to offer services for warranty on the equipment supplied through this tender.

- c. Agree to impart onsite training to the designated personnel of purchaser for stipulated no. of working days mentioned in the tender.
- d. No price of any Equipment/ Spares/ Accessories is given in Technical Bid.
- e. All above equipment are provided with strong base/ safety features/ curtains/ enclosures, etc. wherever applicable.

All consumables, electrical and electronic parts of the product conform to international standard(s).

Name & Signature of the authorized bidder with stamp

Contact details of the bidder signing the tender.

Name.....

Designation.....

Phone (office).....

Phone (Mobile).....

E mail

ANNEXURE-C

FORMAT FOR SUBMISSION OF FINANCIAL BID

1. Tender Ref. No: SRI/Tender/MSD-2025/1
2. Name of the Bidder:
3. The financial offer to execute the supply as per the tender:

Supply of Equipment to Shriram Institute for Industrial Research, Delhi location:

Name of Equipment	Unit Price of Equipment before taxes & duties of single set (In ₹)	Quantity to be supplied (In Nos.)	Total Price of equipment before taxes & duties (In ₹)	Total Price of equipment after taxes & duties (In ₹)
Supercritical Fluid Extraction System				
Twin Shaft Shredder				

The followings to be noted while submitting financial details for the supply of Equipment:

The “Unit Price of the equipment before Taxes & Duties” should be inclusive of all costs involved for the delivery to the destination packing cost, loading / unloading cost, transportation cost, transit insurance cost, any other handling and incidental expenses as envisaged by the bidder, Cost of services to be provided (refer to Para 4 of “Scope of Supplies” of this tender).

I/We as bidder certify that:

- a. The tender shall remain valid for acceptance for 60 days from the date of opening the Technical Bid of the tender.
- b. Agree to offer services for warranty on the equipment(s) supplied through this tender.
- c. Agree to install, commission and impart on-site training to the designated personnel for the stipulated number of working days mentioned in the tender
- d. Agree to three (03) sets of the Installation, Operation, Maintenance, and Training Manuals with equipment.

- a. Agree that the offer price is valid for a period of 60 days from the date of opening of technical bid of this tender.

Further confirm that we agree with the terms and conditions specified in Tender and if selected, the execution of supplies would be made in compliance.

Name & Signature of the authorized bidder with stamp

Contact details of the bidder signing the tender.

Name..... Designation.....

Phone (office)..... Phone (Mobile).....

E-Mail