CENTRE OF EXCELLENCE IN MOLECULAR BIOLOGY (CEMB),
CEMB-87-West Canal Bank Road,
Thokar Niaz Baig, Lahore

Tender Notice No: AO/ 17077
Date: 03.11.2026

BIDDING DOCUMENT

FOR

LP 05 CEMB NOVEMBER 2026
OPERATIONS AND MAINTENANCE (O&M) SERVICES FOR SOLAR SYSTEM AT CEMB

CENTRE OF EXCELLENCE IN MOLECULAR BIOLOGY (CEMB),
CEMB-87-West Canal Bank Road,
Thokar Niaz Baig, Lahore

TENDER NOTICE

Tenders under rule 36 (b) of PPRA rules (2004) through e-procurement (EPADS) are invited from interested Electrical/Civil and Mechanical Contractors/bidder for "Operation & Maintenance (O&M) Services of 600 Kwp Solar System" as mentioned as follow.

Complete Operation & Maintenance (O&M) Services required for 600 Kwp Solar System for one year.	*Estimated Price: Rs 12,00,000/-* *Bid security: 2% of above Estimated price (to be attached with technical bid)*
Mode of Procurement: Single Stage Two Envelope	

All bids must be accompanied by a Bid Security 2% in the amount stated above in the shape of CDR in the Name of "Director, Centre of Excellence in Molecular Biology (CEMB)" and must be delivered at Purchase Section CEMB, on or before **25.11.2026** at 10:00 AM in sealed envelopes. Technical Bids will be opened at 10:30 AM on the same day in the presence of bidder's representatives who choose to attend at the same address**. All the technical and financial bids must be uploaded on e-procurement portal (EPADS).**

The Director CEMB reserves the right to reject any or all tenders. Tender documents will be also available on centre website (www.cemb.edu.pk). If there is a public holiday announced by the Government on the tender opening date, then the tender will be opened on the next working day. It is to be noted that technical tender documents may please be uploaded in the same sequence as demanded in the tender document.

HEAD (Admin), CEMB
Email: admin@cemb.edu.pk
Phone: +92 (42) 35293145,
Cell: 0300-4525194

OPERATIONS AND MAINTENANCE (O&M) SERVICES FOR SOLAR SYSTEM AT CEMB

TERMS AND CONDITIONS OF TENDER:-

1) Sealed tenders should be submitted by **filling in the rate** and amount in the BOQ given in the tender document along with the total tender cost. Each page of the tender should be signed & stamped by the contractor. Incomplete, part or conditional tenders will not be accepted.
2) **Earnest money** at the rate of 2% of the total tender cost in the shape of deposit at call in the name of Director CEMB, Lahore must accompany the tender, failing which the tender will be rejected.
3) Bid validity period after opening of the bid is **90 Days**.
4) **Time of Completion**: 365 days after commencement of the work.
5) Percentage of **retention money**: 10% of gross value of Contract Amounts.
6) Only **registered Contractors**, who are on active tax payers list (ATC) of FBR are eligible to participate in tender competition.
7) The values of amount should not be filled **handwritten** in the tender documents, it must be filled be filled through typing.
8) Income **Tax/**Punjab Sales Tax: Taxes will be deducted as per Government Rules.

Evaluation Criteria of Bidders

<table>
<tr><th>Sr. No.</th><th>Parameters</th><th>Detail</th><th>Maximum Marks</th><th>Remarks</th></tr>
<tr><td>1</td><td>Past Performance (Within previous 3 years)</td><td>(a) Major Institutions Served (15 marks)
<table><tr><td colspan="3">No. of institutions served</td></tr><tr><td>i</td><td>1 to 3</td><td>5</td></tr><tr><td>ii</td><td>4 to 6</td><td>10</td></tr><tr><td>iii</td><td>7 & Above</td><td>15</td></tr></table></td><td>15</td><td>Institutions mean government institutions / Public Sector organizations / Public Sector Universities / Government Agencies / Autonomous Bodies etc.

Copies of relevant work orders / completion certificate must be attached.</td></tr>
<tr><td>2</td><td>Relevant Experience</td><td><table><tr><td colspan="3">General Experience</td></tr><tr><td>i</td><td>1 year</td><td>2</td></tr><tr><td>ii</td><td>2 years</td><td>4</td></tr><tr><td>iii</td><td>Above 2 years</td><td>5</td></tr></table></td><td>5</td><td>Contractor has completed at least 3 projects of similar nature in last five years</td></tr>
<tr><td>3</td><td>Enlistment record with Government Organizations & other agencies</td><td>1 Mark for each enlistment up to maximum of five enlistments

Registration of AEDB/PPIB and PEC</td><td>5</td><td>Enlistment Certificate</td></tr>
<tr><td>4</td><td>Financial Status</td><td><table><tr><td colspan="3">Financial Status</td></tr><tr><td>i</td><td>Tax Returns (Last 3 years). (1 marks each year)</td><td>3</td></tr><tr><td>ii</td><td>Bank Account Maintenance Certificate</td><td>2</td></tr><tr><td>iii</td><td>Bank Statement (Previous 12 months)</td><td>2</td></tr></table></td><td>10</td><td>All provided documents can be verified by the Department.</td></tr>
</table>

		iv | Balance above the amount of quoted items. | 3		
5	Technical Staff (Overall) (Relavant Documents/(CVs)	Technical Staff i | Less than 2 persons | 0 ii | 3 -5 persons and above | 02 iii | 6 persons and above | 04	4	Qualification marks will be awarded on the final degree. Complete supporting documents be attached.
6	Good Reputation Certificate from any Govt. Institution / Private Sector in Connection with Services	Good Reputation Certificate i | No certificate provided | 0 ii | 1 to 2 | 1 iii | 3 to 5 | 3 iv | 6 and above | 5	5	Institutions mean government institutions / Public Sector organizations / Public Sector Universities / Government Agencies / Autonomous Bodies Private Institute etc.
7	Blacklisting from any agency	In case the firm is blacklisted, no Marks will be given and 15 points will be added in case affidavit by the company that it has not been black listed is attached.	15	
8	Litigation History in which Decision has been given against the firm(s)	In case the firm is involved in any litigation, no marks will be given and 10 points will be added in case affidavit of no litigation is attached.	10	
9	Preventive & Corrective Maintenance	Comprehensive schedules for module cleaning, thermal imaging, string testing, inverter servicing, torque checks, and AC/DC panel testing	10	

10	Registration with income tax department	No points will be given if income tax certificate is not attached and 6 points will be added in case of valid certificate	6	
11	Tools & Testing Equipment	Availability of Multimeter, Clamp Meter, Megger, Earth Tester, Thermal Camera, Torque Wrench, Solar Irradiance Meter and other required tools	15	

Total Marks: 100

Qualifying Marks: 65%

Note: Marks will be awarded only if the comprehensive and complete concerned supporting documents are enclosed.

The financial bids of technically accepted bidders will be opened publicly at a time to be announced by the Procuring Agency. The financial bids of the bidders found technically non-responsive shall be returned un-opened to the respective Bidders.

OPERATIONS & MAINTENANCE (O&M) CONTRACT DOCUMENT FOR 600 kWp ON-GRID SOLAR PV SYSTEM

Document Structure: This comprehensive contract document is divided into two binding parts: **Part A (Technical Scope & Special Terms)** and **Part B (Legal Operations & Maintenance Agreement)**.

PART A: TERMS & CONDITIONS SOLAR SYSTEM

1. Scope of Work: The contractor shall provide complete Operation & Maintenance (O&M) services for the existing 600 kWp On-Grid Solar PV System installed at the CEMB premises (Ground Floor / Rooftop sites) for a period of 12 months, including preventive maintenance, corrective maintenance, inspection, testing, cleaning, monitoring, troubleshooting, and emergency services.

2. Solar PV Modules: The contractor shall regularly inspect all PV modules for dust, cracks, hot spots, discoloration, physical damage, loose connections, and other defects. The contractor shall ensure optimal physical condition and operating performance of all modules.

3. Solar Panel Washing / Cleaning: All PV panels shall be cleaned/washed using clean water and suitable non-abrasive cleaning equipment. Cleaning shall be carried out at least **twice per month**, or more frequently if required by environmental site conditions. The contractor shall maintain a verified log of all cleaning activities.

4. Inverter O&M: All installed on-grid inverters shall be inspected and maintained regularly. This includes checking DC/AC voltages, current, frequency, power generation, alarms, fault history, cooling fans, ventilation, electrical terminals, communication gateways, and operating parameters.

5. Electrical Distribution System: Regular inspection and maintenance shall be carried out for DCDBs, ACDBs, LT Panels, MCCBs/MCBs, isolators, fuses, SPDs, busbars, power cables, cable glands, terminals, and MC4 connectors. Loose or defective connections shall be identified and rectified immediately as per approved engineering standards.

6. Mounting Structure Maintenance: PV mounting structures shall be inspected for loose nuts/bolts, clamps, structural supports, corrosion, alignment, and physical stability. Necessary tightening, anti-corrosion touch-ups, and minor structural maintenance shall be included within routine O&M services.

7. Earthing System Verification: The complete earthing system, including earth pits, earthing conductors, and bonding connections, shall be inspected and tested periodically. Earth resistance test results (< 1 Ohm) shall be documented and formally submitted to CEMB.

8. Lightning Protection System: The lightning protection system shall be inspected periodically, including air terminals (ESE/conventional), down conductors, test links, and earthing pits to ensure full lightning protection readiness.

9. Performance Monitoring & SCADA: The contractor shall monitor system performance daily, tracking generation metrics, inverter-wise outputs, system availability, downtime, faults, and alarms. Any abnormal drop in power generation shall be reported immediately to the designated CEMB representative.

10. Preventive Maintenance Protocol: Preventive maintenance across the entire Solar PV System shall be executed strictly in accordance with manufacturer guidelines, OEM warranties, and accepted standard engineering practices.

11. Corrective & Emergency Maintenance: The contractor shall provide round-the-clock corrective and breakdown maintenance throughout the 12-month contract. The contractor shall respond to any fault complaint from CEMB within 04 hours and initiate immediate on-site restoration activities.

12. Provision of Routine Consumables: The contractor's quoted O&M rate shall be inclusive of all routine consumables, minor hardware accessories, non-abrasive cleaning agents, cable ties, lugs, glands, and routine maintenance materials.

13. Major Spare Parts Replacement: Replacement of major capital components (such as string inverters, PV modules, main LT cables, MCCBs/ACBs, complete ACDB/DCDB, and major SPDs) shall require prior written authorization from CEMB and shall be billed separately unless covered under active manufacturer warranty.

14. Testing Equipment & Tools: The contractor shall supply all necessary tools, safety apparatus, and calibrated testing instruments at its own expense, including digital multimeters, clamp meters, insulation resistance testers (Megger), earth resistance meters, torque wrenches, and thermal imaging cameras.

15. Thermographic Inspection: Thermographic (infrared) analysis of inverters, AC/DC distribution panels, circuit breakers, busbars, and high-current cable terminations shall be performed at least twice during the contract term, with detailed diagnostic reports submitted to CEMB.

16. Monthly Performance Reporting: The contractor shall submit a monthly report detailing total solar energy generation, inverter-level efficiencies, fault history, downtime analysis, maintenance activities executed, cleaning logs, and engineering recommendations.

17. Comprehensive Annual O&M Report: At the conclusion of the 12-month term, the contractor shall deliver an annual performance report evaluating overall plant availability, cumulative generation, degradation trends, breakdown logs, and strategic lifecycle recommendations.

18. Technical Manpower Deployment: The contractor shall assign qualified, trained, and certified electrical engineers and technicians possessive of demonstrated experience in commercial/industrial Solar PV operations.

19. Health, Safety & Environment (HSE): The contractor is fully responsible for workplace safety and must enforce mandatory Personal Protective Equipment (PPE) standards, including safety helmets, steel-toe shoes, insulated gloves, eye protection, full-body safety harnesses for elevated works, and certified insulated tools.

20. Site Access & Building Protection: The contractor shall ensure safe site access, clean housekeeping, and rigorous protection of CEMB civil structures, roofs, electrical sub-stations, roads, walkways, and landscaping during all O&M activities.

21. Indemnification & Property Damage: Any direct physical or operational damage caused to CEMB infrastructure due to negligence, improper handling, or unsafe execution by the contractor's personnel shall be repaired or replaced entirely at the contractor's expense.

22. Planned Shutdowns & Isolation: No scheduled plant isolation, grid disconnecting, or electrical switching shall occur without prior formal authorization from the designated CEMB engineer, except in emergency cases requiring immediate safety isolation.

23. Site Records & Maintenance Logs: The contractor shall maintain meticulous site logs covering preventive maintenance routines, breakdown interventions, panel cleaning cycles, electrical test certificates, earthing records, and daily generation logs.

24. Payment Schedule & Verification: O&M payments shall be disbursed on a monthly basis, subject to verified performance, satisfactory service delivery, and approval of the Monthly O&M Report by the authorized CEMB representative.

25. Contract Duration: The O&M contract shall remain active for a period of twelve (12) calendar months starting from the official Date of Commencement.

26. Inspection Rights: CEMB reserves the right to conduct unannounced engineering inspections of the Solar PV System and O&M works at any time. Identified deficiencies shall be rectified by the contractor within 48 hours at no additional charge.

27. Force Majeure & Third-Party Damage: System damage resulting from natural disasters, earthquakes, floods, severe lightning strikes, fires, grid collapse, civil unrest, or third-party vandalism is excluded from standard routine maintenance and shall be addressed separately.

28. Contract Completion & Handover: Upon expiration of the 12-month contract, the contractor shall conduct a formal handover of all technical logs, testing certificates, generation archives, maintenance records, and system keys to CEMB.

29. Inclusive Commercial Rate: The quoted contract price shall be all-inclusive, covering skilled/unskilled labor, engineering supervision, tools, testing apparatus, panel washing equipment, routine consumables, transport, insurance, and overheads for the full 12-month term.

PART B: OPERATIONS AND MAINTENANCE (O&M) LEGAL AGREEMENT

OPERATIONS AND MAINTENANCE (O&M) AGREEMENT FOR 600 kWp SOLAR PHOTOVOLTAIC POWER PLANT

This Operations and Maintenance Agreement ("**Agreement**") is made and executed on this _____ day of _____, 2026 ("**Effective Date**"), at Lahore, Pakistan, by and between:

1. CENTRE FOR EXCELLENCE IN MOLECULAR BIOLOGY (CEMB), University of the Punjab, Canal Bank Road, Thokar Niaz Baig, Lahore, Pakistan (hereinafter referred to as the "**Client**", which expression shall include its legal successors and permitted assigns); AND

2. [O&M PROVIDER COMPANY NAME], a company incorporated under the laws of Pakistan, having its registered corporate office at [O&M PROVIDER REGISTERED ADDRESS] (hereinafter referred to as the "**O&M Provider**", which expression shall include its legal successors and permitted assigns).

Both Client and O&M Provider shall collectively be referred to as the "**Parties**" and individually as a "**Party**".

1. DEFINITIONS AND SYSTEM DESCRIPTION

1.1 System: Means the 600 kWp on-grid solar photovoltaic power plant, including solar PV modules, grid-tied string inverters, mounting structures, AC/DC cabling, LT panels, SCADA monitoring, earthing, and protection systems installed at CEMB, Lahore ("Site").

1.2 Services: Means the comprehensive Operations and Maintenance services detailed in Clause 2 and Part A of this document.

1.3 Contract Year: Means the twelve (12) consecutive month period commencing from the Effective Date.

2. SCOPE OF WORK & SERVICES

2.1 Operational Scope: The O&M Provider shall execute all routine, preventive, predictive, and corrective maintenance activities in accordance with OEM standards and prudent industry practices, including bi-monthly panel cleaning, thermal imaging, electrical testing, and performance reporting.

2.2 Exclusions: The scope excludes: (i) major civil/structural additions; (ii) system capacity expansions; (iii) damage from fire, theft, war, or third-party vandalism; and (iv) grid collapse or utility power outages beyond the O&M Provider's control.

3. SERVICE LEVEL AGREEMENT (SLA) & RESPONSE TIMELINES

3.1 Target Response & Resolution Timelines: The O&M Provider shall respond to reported system faults in accordance with the severity levels specified below:

Fault Category	Description & Severity	Target Response / Resolution
Critical Fault	Complete plant shutdown, inverter outage (>100 kW), or severe safety/electrical hazard.	Initial Response: Within 4 Hours On-Site Action: Within 12 Hours
Major Fault	Partial generation loss, single inverter outage, SCADA communication breakdown.	Initial Response: Within 12 Hours On-Site Action: Within 24 Hours
Minor Fault	Non-critical string deviation, minor sensor error, single panel cosmetic defect.	Initial Response: Within 24 Hours On-Site Action: Within 3 Working Days

4. TERM AND RENEWAL

4.1 Initial Term: This Agreement shall remain in effect for an initial period of twelve (12) calendar months commencing on the Effective Date.

4.2 Renewal Option: Upon expiration of the Initial Term, this Agreement may be renewed for additional 12-month periods upon mutual written consent at least thirty (30) days prior to contract expiration.

5. CONSIDERATION AND PAYMENT TERMS

5.1 Contract Value: The Client shall pay the O&M Provider an agreed fee of PKR [AMOUNT IN FIGURES AND WORDS] per month (plus applicable PST tax), as per the approved BOQ.

5.2 Payment Schedule: Invoices shall be processed monthly in arrears upon verification and approval of the Monthly O&M Report by CEMB within fifteen (15) calendar days of receipt.

6. OBLIGATIONS OF THE O&M PROVIDER

6.1 Standard of Care: Execute all O&M services with professional diligence, deployed technical competence, and strict adherence to electrical safety codes.

6.2 Maintenance Records: Maintain comprehensive site logs, test reports, thermal scans, and generation records, making them accessible to CEMB at all times.

7. OBLIGATIONS OF THE CLIENT (CEMB)

7.1 Site Access & Utilities: Provide unhindered, safe access to the plant site and grant access to clean washing water and auxiliary power necessary for O&M tasks.

7.2 Timely Approvals: Review monthly reports promptly and process verified O&M invoices in accordance with university financial rules.

8. TERMINATION

8.1 Termination for Convenience: Either Party may terminate this Agreement by issuing thirty (30) days' prior written notice to the other Party.

8.2 Termination for Material Breach: Either Party may terminate immediately if the other Party commits a material breach and fails to remedy the breach within fifteen (15) days of written notice.

9. INDEMNITY & LIMITATION OF LIABILITY

9.1 Mutual Indemnity: Each Party shall indemnify and hold harmless the other against direct loss, third-party claims, or property damage resulting directly from gross negligence or willful misconduct.

9.2 Cap on Liability: The aggregate annual liability of the O&M Provider under this Agreement shall be limited to the cumulative O&M fees received during the preceding three (3) months.

10. INSURANCE, FORCE MAJEURE & GOVERNING LAW

10.1 Insurance: CEMB shall maintain comprehensive all-risk property insurance for the solar PV plant asset. The O&M Provider shall maintain Workmen's Compensation and General Liability insurance for its staff.

10.2 Governing Law: This Agreement shall be governed, construed, and enforced in accordance with the laws of the Islamic Republic of Pakistan. Exclusive jurisdiction shall rest with the courts in Lahore.

IN WITNESS WHEREOF, the Parties hereto have executed this O&M Agreement as of the Effective Date written above.

FOR THE CLIENT (CEMB, PU)	FOR THE O&M PROVIDER
Signature:	Signature:
_____	_____
Name:	Name:
_____	_____
Designation:	Designation:
_____	_____
Date:	Date:
_____	_____
Official Seal / Stamp:	Official Seal / Stamp:

CENTRE OF EXCELLENCE IN MOLECULAR BIOLOGY (CEMB),
CEMB-87-West Canal Bank Road,
Thokar Niaz Baig, Lahore

Bill of Quantities (BOQ)

OPERATIONS AND MAINTENANCE (O&M) SERVICES FOR SOLAR SYSTEM AT CEMB

S.No.	Description	QTY	UNIT	SOLAR CAPACITY (kWp)	RATE PER kWp	TOTAL AMOUNTS (Rs.)
1	Providing complete Operation & Maintenance (O&M) Services of existing Solar PV System including preventive maintenance, corrective maintenance, module cleaning, inverter maintenance, electrical inspection/testing, monitoring of solar generation, fault rectification, emergency response, manpower, tools, testing equipment, cleaning equipment, routine consumables, monthly performance reports and annual O&M report, complete in all respects as per technical specifications.	12	Month	600		
				SUB TOTAL		
				PST @16%		
				GRAND TOTAL		

Bill of Quantities (BOQ)

OPERATIONS AND MAINTENANCE (O&M) SERVICES FOR SOLAR SYSTEM AT CEMB

S.No.	Description	QTY	UNIT	SOLAR CAPACITY (kWp)	RATE PER kWp	TOTAL AMOUNTS (Rs.)
1	Providing complete Operation & Maintenance (O&M) Services of existing Solar PV System including preventive maintenance, corrective maintenance, module cleaning, inverter maintenance, electrical inspection/testing, monitoring of solar generation, fault rectification, emergency response, manpower, tools, testing equipment, cleaning equipment, routine consumables, monthly performance reports and annual O&M report, complete in all respects as per technical specifications.	12	Month	600		
				SUB TOTAL		
				PST @16%		
				GRAND TOTAL		