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| RFQ Reference: 20/04/2023 | Date: 24 April 2023 |
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Subject: Supply, Installation, Testing & Commissioning (SITC) of equipment and instruments for setting up the STAR Centre in Ethiopia, Cuba and Kiribati including one year Comprehensive Maintenance Contract (CMC).

SECTION 1: REQUEST FOR QUOTATION (RFQ)

ISA kindly requests your quotation for the provision of goods, works and/or services as detailed in Annex 1 of this RFQ.

This Request for Quotation comprises the following documents:

Section 1: This Request Letter

Section 2: RFQ Instructions and Data

Annex 1: Schedule of Requirements

Annex 2: Quotation Submission Form

Annex 3: Technical and Financial Offer

Annex 4: Description of solar trainer and demonstrator

When preparing your quotation, please be guided by the RFQ Instructions and Data. Please note that quotations must be submitted using Annex 2: Quotation Submission Form and Annex 3 Technical and Financial Offer, by the method and by the date and time indicated in Section 2. It is your responsibility to ensure that your quotation is submitted on or before the deadline. Quotations received after the submission deadline, for whatever reason, will not be considered for evaluation.

The ISA recognizes the importance of valuing diversity and promoting inclusion in all our work programs and partnerships. The ISA highly values engaging with organizations and/or teams that reflect its geographical and diverse nature.

Thank you and we look forward to receiving your quotations.

Issued by:

Signature: _____

Name: Procurement Unit

Date: 24/04/2023

SECTION 2: RFQ INSTRUCTIONS AND DATA

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| Introduction | <p>Bidders shall adhere to all the requirements of this RFQ, including any amendments made in writing by ISA. This RFQ is conducted in accordance with the ISA Financial Regulations and Procedures and ISA Procurement Manual</p> <p>Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by ISA. ISA is under no obligation to award a contract to any Bidder as a result of this RFQ.</p> <p>ISA reserves the right to cancel the procurement process at any stage without any liability of any kind for ISA, upon notice to the bidders or publication of cancellation notice on ISA website</p> |
| Deadline for the Submission of Quotation | <p>15.05.2023 by 1900 HRS IST</p> <p>If any doubt exists as to the time zone in which the quotation should be submitted, refer to http://www.timeanddate.com/worldclock/.</p> <p>For eTendering submission - as indicated in eTendering system. Note that system time zone is in EST/EDT (New York) time zone.</p> |
| Method of Submission | <p>Quotations must be submitted as follows:</p> <p><input type="checkbox"/> E-tendering</p> <p><input checked="" type="checkbox"/> Dedicated Email Address</p> <p><input type="checkbox"/> Courier / Hand delivery</p> <p><input type="checkbox"/> Other Click or tap here to enter text.</p> <p>Bid submission address: procurement@isolaralliance.org</p> <ul style="list-style-type: none"> ▪ File Format: PDF files only ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted. ▪ Max. File Size per transmission: 10 MB ▪ It is recommended that the entire Quotation be consolidated into as few attachments as possible. ▪ The bidder should receive an email acknowledging email receipt. |
| Cost of preparation of quotation | <p>ISA shall not be responsible for any costs associated with a Bidder's preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.</p> |
| Supplier Code of Conduct, Fraud, Corruption, | <p>All prospective suppliers must read the ISA Supplier Code of Conduct and acknowledge that it provides the minimum standards expected of suppliers to the ISA. The Code of Conduct, which includes principles on labour, human rights, environment and ethical conduct may be found at: https://isolaralliance.org/images/ISA%20Supplier%20Code%20of%20Conduct_14.4.2023.final%20version.pdf</p> <p>Moreover, ISA strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of ISA vendors and requires all bidders/vendors to observe the highest standard of ethics during the procurement process and contract implementation.</p> |
| Gifts and Hospitality | <p>Bidders/vendors shall not offer gifts or hospitality of any kind to ISA staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches, dinners or similar. In pursuance of this policy, ISA: (a) Shall reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the</p> |

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| | <p>vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a ISA contract.</p> |
| <p>Conflict of Interest</p> | <p>ISA requires every prospective Supplier to avoid and prevent conflicts of interest, by disclosing to ISA if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, specifications, cost estimates, and other information used in this RFQ. Bidders shall strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have an undisclosed conflict of interest shall be disqualified.</p> <p>The ISA shall have the discretion to disqualify or proceed with a bidder who has disclosed a probable conflict of interest subject to further evaluation and review of various factors such as access to sensitive information which may confer unfair advantage as against other bidders. The decision on a probable conflict of interest shall be made in the best interest of the work of the ISA.</p> <p>Bidders must disclose in their Bid their knowledge of the following: a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel who are family members of ISA staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving goods and/or services under this RFQ.</p> <p>The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to ISA's further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this RFQ, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Bid.</p> |
| <p>General Conditions of Contract</p> | <p>Any Purchase Order or contract that will be issued as a result of this RFQ shall be subject to the General Conditions of Contract</p> <p><input type="checkbox"/> https://www.isolaralliance.org/images/ISA_GTB.pdf</p> |
| <p>Special Conditions of Contract</p> | <p><input type="checkbox"/> Cancellation of PO/Contract if the delivery/completion is delayed by 10 days</p> <p><input type="checkbox"/> Others [pls. specify]</p> |
| <p>Pre-bid Conference</p> | <p>Not Applicable</p> |
| <p>Eligibility</p> | <p>A vendor who will be engaged by ISA may not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to ISA whether they are subject to any sanction or temporary suspension imposed by these organizations. Failure to do so may result in termination of any contract or PO subsequently issued to the vendor by ISA.</p> <p>It is the Bidder's responsibility to ensure that its employees, joint venture members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by ISA.</p> <ul style="list-style-type: none"> • Bidders must have the legal capacity to enter a binding contract with ISA and to deliver in the country, or through an authorized representative. Company registration certificate or any other document proving legal entity. • The bidder must have the experience of supply of solar equipment's / hardware components. Submit copy of work order or completion certificate • The bidder must have annual turnover of more than USD 100,000 - Please attach relevant documents. |

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| Currency of Quotation | Quotations shall be quoted in USD |
| Joint Venture, Consortium or Association | <p>If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between ISA and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture, Consortium or Association.</p> <p>Refer to Clauses 22 – 27 under Solicitation Process in the Procurement Manual (will be provided on request) for details on the applicable provisions on Joint Ventures, Consortium or Association.</p> |
| Only one Bid | <p>The Bidder (including the Lead Entity on behalf of the individual members of any Joint Venture, Consortium or Association) shall submit only one Bid, either in its own name or, if a joint venture, Consortium or Association, as the lead entity of such Joint Venture, Consortium or Association.</p> <p>Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:</p> <p>a) they have at least one controlling partner, director or shareholder in common; or b) any one of them receive or have received any direct or indirect subsidy from the other/s; or</p> <p>b) they have the same legal representative for purposes of this RFQ; or</p> <p>c) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Bid of, another Bidder regarding this RFQ process;</p> <p>d) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or</p> <p>e) some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this RFQ process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.</p> |
| Duties and taxes | <p>The United Nations (privileges and immunities) Act, 1947 is applicable to ISA pursuant to a notification by the host country. Therefore, ISA is exempt from all direct taxes, except charges for public utility services, and is exempt from customs restrictions, duties, and charges of a similar nature in respect of articles imported or exported for its official use in India. All quotations shall be submitted net of any direct taxes and any other taxes and duties, unless otherwise specified below:</p> <p>All prices must:</p> <p><input checked="" type="checkbox"/> be inclusive of VAT and other applicable indirect taxes</p> <p><input type="checkbox"/> be exclusive of VAT and other applicable indirect taxes</p> <p>[according to project and applicable country agreement]</p> |
| Language of quotation | <p>English</p> <p>Including documentation including catalogues, instructions and operating manuals.</p> |
| Documents to be submitted | <p>Bidders shall include the following documents in their quotation:</p> <p><input checked="" type="checkbox"/> Annex 2: Quotation Submission Form duly completed and signed</p> <p><input checked="" type="checkbox"/> Annex 3: Technical and Financial Offer duly completed and signed and in accordance with the Schedule of Requirements in Annex 1</p> <p><input checked="" type="checkbox"/> Company Profile.</p> <p><input checked="" type="checkbox"/> Registration certificate;</p> <p><input checked="" type="checkbox"/> Company Profile.</p> <p><input checked="" type="checkbox"/> Descriptive Literature: Bidders shall provide full technical details of products being offered, including technical sheets and pictures showing details and general views. Specific details of items offered should be clearly stated as standard catalogues may offer options;</p> <p><input checked="" type="checkbox"/> Documents showing that the bidder has minimum of five (5) years of relevant experience – proof of purchase orders/ contract is to be submitted.</p> <p><input checked="" type="checkbox"/> Documents showing that the bidder has an experience of design, supply, installation and commissioning of Grid connected/off grid Solar PV Power Plant and experience of rendering operation and maintenance services for Solar PV units.</p> |

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| | <input checked="" type="checkbox"/> Statement of satisfactory Performance (Certificates) from the top two clients in terms of Contract value in similar field, plus client's contact details who may be contacted for further information on those contracts; |
| Quotation validity period | Quotations shall remain valid for 90 days from the deadline for the Submission of Quotation. |
| Price variation | No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted at any time during the validity of the quotation after the quotation has been received. |
| Partial Quotes | <input checked="" type="checkbox"/> Not permitted <input type="checkbox"/> Permitted Insert conditions for partial quotes and ensure that the requirements are properly listed in lots to allow partial quotes |
| Alternative Quotes | <input checked="" type="checkbox"/> Not permitted |
| Payment Terms | <input checked="" type="checkbox"/> Within 30 days upon ISA's acceptance and receipt of invoice. |
| Conditions for Release of Payment | <input checked="" type="checkbox"/> Written Acceptance of Goods & Services, based on full compliance with RFQ requirements. <input checked="" type="checkbox"/> 100% of <u>goods charges</u> after successful delivery and acceptance of goods. <input checked="" type="checkbox"/> 100% of <u>Installation & Commissioning charges</u> after successful installation and commissioning <input checked="" type="checkbox"/> 100% of <u>training charges</u> after completion of Training on Operation and Maintenance. <input checked="" type="checkbox"/> 100% of <u>Comprehensive maintenance charges</u> after successful 1 year of installation and commissioning |
| Contact Person for correspondence, notifications and clarifications | E-mail address: anupol@isolaralliance.org Attention: Quotations shall not be submitted to this address but to the address for quotation submission above. Otherwise, offer shall be disqualified. Any delay in ISA's response shall be not used as a reason for extending the deadline for submission, unless ISA determines that such an extension is necessary and communicates a new deadline to the Proposers. |
| Clarifications | Requests for clarification from bidders will not be accepted any later than 2 days before the submission deadline. Responses to request for clarification will be communicated thru email. |
| Evaluation method | <input checked="" type="checkbox"/> The Contract or Purchase Order will be awarded to the lowest price substantially compliant offer |
| Evaluation criteria | <input checked="" type="checkbox"/> Full compliance with all requirements as specified in Annex 1 <input checked="" type="checkbox"/> Full acceptance of the General Conditions of Contract <input checked="" type="checkbox"/> Comprehensiveness of after-sales services <input type="checkbox"/> Earliest Delivery /shortest lead time <input type="checkbox"/> Others Click or tap here to enter text. |
| Right not to accept any quotation | ISA is not bound to accept any quotation, nor award a contract or Purchase Order |
| Right to vary requirement at time of award | At the time of award of Contract or Purchase Order, ISA reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions. |
| Type of Contract to be awarded | <input type="checkbox"/> Purchase Order <input checked="" type="checkbox"/> Contract for Works <input type="checkbox"/> Other Type/s of Contract [pls. specify] |

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| Expected date for contract award. | 10 June 2023 |
| Publication of Contract Award | ISA will publish the contract awards valued at USD 100,000 and more on the ISA website. |
| Policies and procedures | This RFQ is conducted in accordance with ISA Financial Regulation and Procedures and ISA procurement manual |
| Other Provisions | <p>The ISA is striving to achieve gender parity in all its activities. In this regard, female-owned organizations and/or teams with significant gender diversity are strongly encouraged to submit a proposal.</p> <p>The ISA recognizes the importance of valuing diversity and promoting inclusion in all our work programs and partnerships. The ISA strives to engage with organizations and/or teams that reflect its geographical representation and diversity.</p> |

ANNEX 1: SCHEDULE OF REQUIREMENTS

Recognizing the urgent need to support the developing country (ISA members) with high potential for solar technology deployment, the ISA Assembly agreed to establish an international network of STAR C (Solar technology Application Resource Centre). The overarching objective of the STAR C initiative is to provide solar technology and application resourcing services to Member Countries so that these countries can achieve the ISA's vision of scaled up and accelerated large scale deployment of solar energy to meet the respective countries' priority energy access, energy transformation and energy security needs.

ISA aims to have a number of STAR centres across the globe acting as a shared facility that provides capacity for deployment of solar energy applications and research, business modelling, incubation, training, standardization and testing engaging faculty members from different disciplines/institutes of excellence and provide/use shared facilities, labs, testing centres etc.

In order to equip these STAR Centres, ISA aims to procure equipment and instruments that help the centres to offer hands on training; act as a testing facility and setup a knowledge management centre.

Such centres are being created by ISA in three countries- Ethiopia, Cuba and Kiribati. The host institution for these STAR Centres are at

1. **University of Addis Ababa in Ethiopia,**
2. **University of Havana in Cuba**
3. **Kiribati Institute of Technology in Kiribati Is.**

This RFQ is for Supply, Installation, Testing & Commissioning (SITC) of equipment and instruments for setting up the STAR Centre in all the three countries Ethiopia, Cuba and Kiribati Is including one year Comprehensive Maintenance Contract (CMC). The bidder can bid for one or more countries.

A needs assessment and situation analysis were undertaken in Ethiopia, Cuba and Kiribati Is, to identify the high growth sectors within solar energy technology, and the attendant training needs. SHS, PV Parks, Solar rooftop and Solar Pumps are the three high growth sectors in Ethiopia, Cuba and Kiribati Is. These sectors will drive solar training needs in the medium to long term and require trained technicians and engineers to size, install, operate and maintain solar systems for socio-economic development, especially in rural and peri-urban areas. The current solar training and testing facilities as well as the solar curriculum was evaluated for gaps through secondary research and primary stakeholder interviews with the private sector companies, industry bodies, government, and academia.

The major findings were the need for understanding of the various solar components, design, sizing, installation, operations, and maintenance. According to the evaluation of the needs and gaps, a list of solar equipment has been suggested for the STAR C to prioritize in its implementation. A detailed list of the technical specifications is provided:

Recommended Technical Specifications for Goods (Quantity given below is for one country only, the bidder has to provide the quantity for 3 countries depending on whether bidder is submitting the bid for one or more countries. Bidder can submit bids for one, two or all three countries.

| S. No. | Item Name | Minimum technical requirements | Unit | Quantity for one country |
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| 1 | Solar PV Modules | <p>Monocrystalline/Polycrystalline Solar modules with individual capacity not less than 330 Wp (specs can be updated as per available brands).</p> <p>Total cumulative capacity shall be no less than 5 kWp</p> <ul style="list-style-type: none"> • IEC 61215 and 61730 • ISO9001 and ISO14001 • Warranty: 25 years | pcs | 8-12* |

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| 2 | Mounting support structure | <p>Aluminium/Hot-dipped Galvanised Iron ground mount with single slot U beam.</p> <ul style="list-style-type: none"> • Foundation type: Pile driven, ground screw, concrete pad • Surface treatment: 10um thick. Anodized aluminum 6005-T5, stainless steel 304 bolts and nuts • Wind load: Minimum 60m/s • Warranty: 20 years | pcs | 1 |
| 3 | Weather resistant HDPE junction box (DC Distribution box and AC Distribution box) | <p>Waterproof IP65 junction box with necessary fuse and surge protections.</p> <p>Seal shall be designed to protect from water jets, sprays, and splashes.</p> | pcs | 1 DCDB, 1 ACDB |
| 4 | Inverter (hybrid) | <p>230V/48V Inverter</p> <ul style="list-style-type: none"> • System voltage: 48 Vdc • Max PV array power: 5 kWp • AC Frequency: 50/60 Hz (auto) • AC Output: 5 kVA, 230V • Equipped with Surge protection device • Warranty: 5 years | pcs | 1 |
| 5 | Battery Pack | <p>12V-250AH sealed deep cycle AGM battery pack with life of not less than 1000 charge cycles.</p> <ul style="list-style-type: none"> • Electrical Capacity at 20-Hour Rate: 1200Ah • Electrical Capacity at 5-Hour Rate: 892Ah • Warranty for not less than 3 years. • Suitable connecting cables with 2-meter length from battery pack to Inverter. | pcs | 4 |
| 6 | Battery charge controller | <p>10A amp or above MPPT/PWM Solar Charge Controller Regulator 24V/48V Auto Switch.</p> | pcs | 1 |
| 7 | Battery cable with 30 A Fuse | <p>MC4 In-Line Fuse Connector & 30A DC Fuse</p> <ul style="list-style-type: none"> • Rubber insulated, flexible, multistrand copper conductor, LT grade, single core for each terminal • Cable Size: 10 sq mm • Rated Voltage 1000V DC, Rated Current 30A & tested voltage 6KV (50Hz, 1min) • Temperature range: -40°C to +85°C • Insulation diameter wires: 2.5mm to 6mm • IP67 Water & Dustproof | pcs | 1 |
| 8 | Battery rack | <p>Heavy duty battery rack for batteries</p> <ul style="list-style-type: none"> • Shall be made up of Mild Steel with Rust proofing or re-enforced plastic capable of handling the battery weight • Easy assembly and dismantling • Shelf adjustment • Warranty – 5 years | pcs | 1 |

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| 9 | PV Module connector | <p>MC4 connector pair – plug and socket 4-6 mm².</p> <ul style="list-style-type: none"> • touchproof, unplugged IP2X • protection, plugged IP67 • temperature range from -40° to 90°C • isolation material: PA • cable strain relief according to IEC 61984 (06.2001) • contact system: MC-contact lamellas • contact material: tinned copper • flame class: UL94-V0 • protection class: II • system voltage up to 1000V • rated amperage up to 30A | pcs | 100 |
| 10 | Ground fault circuit breaker | <p>Provides protection to people and installations against fault current to earth.</p> <ul style="list-style-type: none"> • Standards: IEC/EN 61008, UL 1053 • Rated voltage: 230V • Rated frequency: 50/60 Hz • Electrical Endurance: 10000 cycle | pcs | 1 |
| 11 | Earthing kit | <p>Lightning arrester made with galvanized iron with anti-corrosion properties or made of Copper.</p> <ul style="list-style-type: none"> • Minimum Length: 1 m • Minimum diameter: 25 mm • Provides protection in 2m radius | pcs | 1 |
| 12 | Solar instrumentation box (tool kit) | <p>Good quality Tool Set of international repute</p> <ul style="list-style-type: none"> • Drilling Diameter: 10 mm; • Drill spindle connecting thread: 43 • Chuck capacity, min./max.: 1.5 – 10 mm • Operating power: 500 watts • Package Contents: Impact drill, claw hammer, pliers and knife, spirit level, wrench, drill bit for (wood, steel and concrete), screws, wall plugs, screw driving bits and nut bits | pcs | 1 |
| 13 | Vernier Caliper | Stainless steel digital calliper 150mm / 6 inches. | pcs | 1 |
| 14 | Digital multimeter | <p>Digital multi-metre (of international repute) for AC/DC voltage, resistance, capacitance, frequency measurement.</p> <ul style="list-style-type: none"> • Voltage: DC: 600 volts; AC: 600 volts; DC Accuracy: ± 0.5% + 3 digit; AC Accuracy: ± 1% + 3 digit • Resistance: 40 M ohm; Resistance Accuracy: ± 1.5% + 3 digit • Capacitance: 100 µF • 1 year warranty | pcs | 2 |
| 15 | Clamp meter | 200A AC/DC Clamp Meter Set (of international repute) | pcs | 2 |

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| | | <ul style="list-style-type: none"> • 200 A ac and dc current • 600 V ac and dc voltage measurement range • Measurement accuracy: +/- .5% • 18mm triangular jaw • 3000 Ω resistance range • continuity detection • CAT III 600 V safety rating | | |
| 16 | Pyranometer (to measure the solar radiation flux density (W/m)) | <p>Infrared battery powered Pyrometer(of international repute)</p> <ul style="list-style-type: none"> • Ambient operating range : 0°C - 50°C • Storage temperature : -20°C - 65°C • Standards: EN 61326-1 Electromagnetic Emissions and Susceptibility EN 61010-1 General Safety EN 60825-1 Laser Safety Certification CE, CMC • Warranty: 1 year | pcs | 2 |
| 17 | Wind speed sensor | <p>Rugged, corrosion-resistant high performance wind speed sensor</p> <ul style="list-style-type: none"> • Range: 0 to 50 m/s, Gust Survival 60 m/s • Sensor: 12 cm cup wheel assembly • 40 mm hemispherical cups • Turning Factor: 75 cm (2.46 ft) • Distance Constant: 2.3 m (7.5 ft.) for 63% recovery • Threshold Sensitivity: 1.1 m/s (2.5 mph) • Transducer: Stationary coil 1300 Ohm nominal DC resistance • Output Signal 4-20 mA = 0-50 m/s • Power Requirement: 8 – 30 VDC • Operating Temperature: -50 to 50°C (-58 to 122°F) | pcs | 1 |
| 18 | Measuring tape | <p>3In1 Laser Tape Measure Laser</p> <ul style="list-style-type: none"> • ABS+ manganese steel ruler belt • 40 meters laser ranging +5 meters tape measure + laser cross marking line + 60m laser ranging + 5m tape measure + laser cross marking line • Battery type: Two AAA batteries • Size: 85 * 82 * 56 mm • Temperature range: 0-40 degrees Celsius • Measurement accuracy: 2mm • Dust and splash proof: IP54 • Maximum/Minimum value: Minimum value 0.005, maximum value 60 m | pcs | 1 |
| 19 | Spirit level | <p>Spirit Level (0.5mm accuracy, without magnet): an instrument designed to indicate whether a surface is horizontal (level) or vertical</p> <ul style="list-style-type: none"> • Size/Length: Minimum 60 cm | pcs | 1 |
| 20 | Compass | <p>Waterproof outdoor compass.</p> <ul style="list-style-type: none"> • Dial Diameter: 65 mm (minimum) | pcs | 1 |

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| | | <ul style="list-style-type: none"> Accuracy: +/- .5° | | |
| 21 | Pathfinder | Non-electronic solar pathfinder working on reflective principle. | pcs | 2 |
| 22 | Cable Cutter | <p>Multi-functional automatic wire stripper.</p> <ul style="list-style-type: none"> Stripping range: 0.2-6.0mm² Crimping range: 0.5-6.0mm² AWG : 10-22AWG | pcs | 1 |
| 23 | Insulation Tester | <p>Insulation Tester (of international repute)</p> <ul style="list-style-type: none"> Measurement Range: 10 GOhm Test Voltage: 50V, 100V, 250V, 500V, 1000 V Auto Discharge: Discharge Time 0.5 Second for C= 1 F or Less Live Circuit Indicator: Inhibit Test if Terminal Voltage > 30 Volts Prior to Initializations of Test | pcs | 1 |
| 24 | IV Curve Tracer | <p>Device should of good quality and of international repute</p> <p>Device allows the measurement of the IV characteristic of photovoltaic modules as well as strings and arrays up to 1500 V-DC</p> <ul style="list-style-type: none"> Voltage: 25V / 100V / 500V / 1500V Current: 2A / 5A / 10A / 20A Temperature: -40°C - +100°C with Pt1000 Irradiance: 0 - 1300W/m² (Standard sensor) Accuracy: Sampling rate max. 100kHz Resolution 0.01V - 0.25V, 0.005A – 0.01A (depending on sel. range) Accuracy of the a/d converter 0.08% of FSR ± 1 LSB Accuracy Peak power measurement: ±5% Reproducement: ±2-3% | pcs | 1 |
| 25 | <p>PV Solar Energy Advanced Trainer</p> <p><i>Details in Annex 4</i></p> | <p>Modular trainer for the theoretical and practical study of the electric energy generation from photovoltaic panels. Intro to solar thermal (hot water) and solar PV systems.</p> <ul style="list-style-type: none"> Electronic charge regulation module, with LCD display, MPPT tracking and energy monitor. Load management module with three independent single-phase outputs for the dynamic study of different load types. Active DC load used in the renewable energies laboratories configurable as constant resistance or constant current. Network monitor module used to measure electrical parameters in a single phase circuit Circuit breaker module. Fixed single phase power source rated at mains voltage with auxiliary 12 Vdc fixed regulated voltage output to power measurement modules DC load module. It includes a 20W dichroic lamp and a 3W LED lamp, with independent switches. | pcs | 1 |

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| | | <ul style="list-style-type: none"> • Inclinable photovoltaic panel, approx. 90W, 12V, complete with a cell for measuring the solar irradiation and a temperature sensor. • Battery and battery protection module. • A Grid-tie inverter output at mains voltage, 12V, 300W. • Multifunction measurement module: solar irradiation (up to 1000 W/m²), solar panel temperature (up to 400°C), 2 DC power meters (65Vdc, 20Adc, 1000W) and 1 AC power meter (512Vac, 20Aac, 1000W). • Off-grid inverter module, with sinusoidal output at mains voltage. Average power: 300 W. • Sun simulator consisting of halogen lamps to provide energy to the photovoltaic module for indoor use. • Three level frame. | | |
| 26 | Solar Energy Demonstrator <i>Details in Annex 4</i> | Intro to generation of electric power from sun via solar PV <ul style="list-style-type: none"> • How solar cells work • Battery storage techniques • Conversion from AC to DC power • Model No.: LB | pcs | 1 |
| 27 | Cables | Solar Flex-X 1x4 black | m | 100 |
| 28 | Soldering iron and plugs | Electric Soldering Iron 220V-110V Kit Welding Repair Tools. <ul style="list-style-type: none"> • Voltage: AC220-240V ORAC100-130V • Power: 80W • Frequency: 50Hz/60HZ • Temperature Range: 180~500°C/356~932°F • Temperature Stability: ±5 C • Heating Type: W more Ceramics Element • Soldering Iron Tips: 900M-B1.2 • Wire Length: 1.4m / 55.12inch (minimum) | pcs | 1 |
| 29 | PPE kit | Disposable protective clothing with non-toxic, tear-resistant, waterproof, oil-proof, breathable, anti-static, dust-proof, anti-liquid splashing and other functions. Sizes: <ul style="list-style-type: none"> • L: Bust: 130cm; Suitable height: 173cm (10 nos.) • XL: Bust: 135cm; Suitable height: 178cm (10 nos.) • 2XL: Bust: 140cm; Suitable height: 181cm (10 nos.) | pcs | 30 |

*Depending on final capacity of solar panels to be offered by the bidders. At least six 350 watt-peak solar panels required for a 2 kWp system (2000/350=5.7).

#Batteries within the capacity range of 12V- 200 Ah to 12V- 300 Ah are to be provided for total storage capacity of 12V- 1250 Ah.

Additional items to be considered for Cuba:

| S. No. | Item Name | Minimum technical requirements | Unit | Quantity |
|--------|-----------|--------------------------------|------|----------|
|--------|-----------|--------------------------------|------|----------|

| | | | | |
|----|---|---|------|---|
| 1 | PV reference module | Same classification as above | pcs | 1 |
| 2 | Spectroradiometer to measure the solar spectral distribution between 300 and 2500nm | Combines the MS-711 and MS-713. The MS-711 measures between 300nm and 1100nm, while the MS-713 covers the near-infrared (NIR) range between 900nm and 2500nm. Reference: EKO WISER II Spectroradiometer. | kit | 1 |
| 3 | Infrared Camera PV Inspection | Professional thermal imager: resolution 640 × 480 pixels, focus manual/auto, laser, thermal sensitivity < 40 mK, standard lens, design with wrist strap, along with the rotatable, fold-out display with high brightness (to be seen in the sun), with standart accesories. Reference: TESTO 890-1 Order-Nr. 0563 0890 X1 | Kits | 1 |
| 4 | Professional single-handed 3-axis gimbal | For DSLR and small cinema cameras, Tested payload of up to 4.5 kg Reference: . DJI RS 3 Pro | U | 1 |
| 5 | Four-Quadrant Bipolar Power Supply for PV I-V curve analysis | Four-Quadrant Bipolar Power Supply for PV I-V curve analysis for operating in four-quadrant mode. Umax± 60V, Imax ±20A, 1200W, power input 220-240 Vac 60Hz Reference: matsusada DOS60-20 | kit | 1 |
| 6 | DAQ device with 8 SE simultaneous analog inputs | DAQ device with 8 SE simultaneous analog inputs, 16-bit resolution, 50 kS/s/ch sample rate, 8 digital I/O, and 1 counter input Reference: USB-1608FS-Plus | U | 2 |
| 7 | Small Area Solar Simulator | Solar Simulator, Class AAA, 150W, 50×50mm, 50×50mm at 1 sun, Included Power Supply: (601-150) 150W Adjustable Power with Touchscreen Control CE Compliant, are a 150W xenon arc lamp, filter holder, height-adjustable stand, manual attenuator, manual shutter, beam turner, and testing report | kit | 1 |
| 8 | Solar pumping demonstrative system | PV modules, structure for PV modules, water pump, controller, protection box, accessories | kit | 1 |
| 9 | Air Conditioning Unit | Refrigeration capacity: 2 Tons of refrigeration (24,000 BTU or 7 kWh) Technology: inverter Type: split with outdoor unit Power supply voltage: 220-240V 50-60Hz | pcs | 1 |
| 10 | Adapter, 10/100 RJ45 Ethernet to 2 x RS422/RS485 Serial | Adapter, 10/100 RJ45 Ethernet to 2 x RS422/RS485 Serial Reference: ES-313 | Kit | 2 |

The company selected for installation and commissioning should ensure proper synchronization and integration of the solar system and associated components to enable productive loads and smooth operation.

Notes:

1. The offered PV Modules should comply with the relevant IEC standards, including but not limited to IEC 61215, IEC 61730, UL 61730, IEC 62716 as well as local country's standards.
2. All solar components imported to Ethiopia, Cuba and Kiribati Is must comply with the import quality standards for these countries.
3. Brands mentioned (if any) are indicative only. ISA may consider equivalent brands meeting the specifications.
4. Bidders are free to procure items locally within the mentioned country as well.

The company needs to submit relevant documents towards compliance of the above standard.

General Guidance

- The bidder can bid for one or more countries out of the three countries.
- The bidder can source the equipment from anywhere, but the equipment should be of good quality meeting the specifications as listed in the table.
- In case of battery, the bidder can procure it locally where the centre is being established.
- The preferred mode of transportation will be air freight, however economical route needs to be considered. The delivery, commissioning time in each country for all the equipment is maximum 90 days.
- The list if the equipment given above is only for one country. However, bidder needs to consider the same set of equipment for all three countries in case the bidder is planning to submit the bid for all three countries. Additional items need to be procured for Cuba, the list of additional items is also given in the RFQ document.
- It is bidder's responsibility to arrange labour or technicians for installation of equipment. The cost can be included in the final costing of the equipment.
- The bidder will provide manufacturer's warranty for all the equipment with complete documentation.

B. Objective

The objective of the assignment is to set up a model solar training and application resource centre (STAR C) lab at the **University of Addis Ababa, Ethiopia; University of Havana; Cuba and Kiribati Institute of Technology in Kiribati Is.**

C. Scope of Work

1. Component A: Supply, installation and Commissioning of the equipment's given in the above table.
2. Component B: Training of the Country's staff on Operation and Maintenance practice of the equipment and instruments.
3. Component C: Comprehensive Operation and Maintenance for 1 year post commissioning.

The roles and responsibilities of the bidder and ISA are outlined below:

Bidder's Terms of reference:

- Design concepts
- Supply of materials and products
- Provide adequate skilled labour for installation and commissioning
- Construction supervision / contract management
- Quality control plan (QCP) and Safety plan

- Commissioning of project
- Mentoring and training, building operating staff for operation and maintenance
- Operation and Maintenance for first year and optional service plan after the first year

ISA and Country's identified STAR-Cs responsibilities:

- Provide location to install solar panels as per the contract.
- Review for approval design submittals
- Witness inspections and test witnesses to verify attainment of performance requirements
- Make progress payments for any service agreed
- Allow consultants access to STAR-C premises for site visit/energy audit exercise.
- Approve any contracts agreed with the consultant.

Payment Terms

For Component-A (Supply, Installation and Commissioning of the equipment's)

| S. No. | Description of Deliverables | Timelines | Release of payment |
|--------|---|-----------|--------------------|
| 1 | Kick-off meeting with a tentative plan for supply of material, Installation & Commissioning | 1 Week | 20% |
| 2 | Dispatch of material (Document proof of dispatch) | 3 Weeks | 10% |
| 3 | Successful delivery of material on site. | 10 Weeks | 50% |
| 4 | Successful Installation, Commissioning | 12 Weeks | 15% |
| 5 | After successful operation for 3 months | | 5% |

Notes:

- Transportation cost will be paid at the time of dispatching of the material.
- Custom duty/excise duty will be paid on actual after submission of invoice and proofs.
- Part payments will be allowed for Component-A pricing.

For Component-B (Training of the Country's staff on Operation and Maintenance practice of the equipment and instruments)

| S. No. | Description of Deliverables | Timelines | Release of payment |
|--------|--|--|--------------------|
| 1 | Training of the Country's staff on Operation and Maintenance practices | Within 2 Weeks after Successful Installation & Commissioning | 100% |

Notes:

- Training of 3-5 people for maximum 4 days on day-to-day O&M of the equipment's.

For Component-C (Comprehensive Operation and Maintenance for 1 year post commissioning)

- Payment will be processed in two tranches, 1st tranche at the end of six months after commissioning and 2nd Tranche at the end of 12 months after commissioning.

Delivery Requirements

| Delivery Requirements | |
|--|---|
| Delivery date and time | Bidder shall complete the delivery and installation within 90 days from the issuance of Contract. |
| Delivery Terms (INCOTERMS 2020) | Delivered at Place |
| Customs clearance | <input type="checkbox"/> Not applicable Shall be done by: <input type="checkbox"/> Name of organisation (where applicable) <input checked="" type="checkbox"/> Supplier/bidder <input type="checkbox"/> Freight Forwarder |
| Exact Address(es) of Delivery Location(s) | Ethiopia: University of Addis Ababa, Ethiopia Cuba: University of Havana, Cuba Kiribati Is: Kiribati Institute of Technology |
| Distribution of shipping documents (if using freight forwarder) | Bidder responsibility |
| Packing Requirements | Safe delivery of supplies, handling will be bidders responsibility |
| Training on Operations and Maintenance | Within 14 days of delivery and installation |
| Warranty Period | At least one year |
| After-sales service and local service support requirements | One year |
| Preferred Mode of Transport | Air |

NOTES:

- a. Bidder may quote for any of the three countries, or all countries based on their interest. In case, bidder is quoting for more than one country, **Bidders shall submit separate financial offer for each country they quote. The bid for different countries should be clearly marked with the country's name.**
- b. The products/goods/parts of machineries must be recalled by the manufacturer/ bidder/ supplier at the manufacturers/ bidder/ suppliers cost if rejected by ISA/ purchaser or end user because of the problems with quality. The supplier/ bidder/ manufacturer will be obliged to replace the products/goods/parts of machineries in question at its own cost with a new one of acceptable quality.
- c. The supplier will be responsible for protection of materials, property and equipment before successful delivery and handover to ISA.
- d. Prices quoted must be inclusive of all costs necessary to supply these items, including delivery, warranty, transport cost, insurance, materials, installation, training and commissioning etc.
- e. OEM of equipment's' can be from any country. However, meeting the technical specifications is mandatory requirement.
- f. Items can be procured locally, within the country. However, bidder shall provide 1 year CMC as per the contract.

ANNEX 2: QUOTATION SUBMISSION FORM

Bidders are requested to complete this form, including the Company Profile and Bidder's Declaration, sign it and return it as part of their quotation along with Annex 3: Technical and Financial Offer. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.

| | | |
|-----------------|----------------------------------|-------------------------------------|
| Name of Bidder: | Click or tap here to enter text. | |
| RFQ reference: | Click or tap here to enter text. | Date: Click or tap to enter a date. |

Company Profile

| Item Description | Detail |
|---|---|
| Legal name of bidder or Lead entity for JVs | Click or tap here to enter text. |
| Legal Address, City, Country | Click or tap here to enter text. |
| Website | Click or tap here to enter text. |
| Year of Registration | Click or tap here to enter text. |
| Legal structure | Choose an item. |
| Are you a UNGM registered vendor? | <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, insert UNGM Vendor Number |
| Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? (If yes, provide a Copy of the valid Certificate): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Does your organization demonstrate significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies or membership of trade institutions promoting such issues (If yes, provide a Copy) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

| Is your company a member of the UN Global Compact | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
|---|---|----------------|--------------------|--------------------------------|
| Bank Information | Bank Name: Click or tap here to enter text. Bank Address: Click or tap here to enter text. IBAN: Click or tap here to enter text. SWIFT/BIC: Click or tap here to enter text. Account Currency: Click or tap here to enter text. Bank Account Number: Click or tap here to enter text. | | | |
| Previous relevant experience: 3 contracts | | | | |
| Name of previous contracts | Client & Reference Contact Details including e-mail | Contract Value | Period of activity | Types of activities undertaken |
| | | | | |
| | | | | |
| | | | | |

Bidder's Declaration

| Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Requirements and Terms and Conditions: I/We have read and fully understand the RFQ, including the RFQ Information and Data, Schedule of Requirements, the General Conditions of Contract, and any Special Conditions of Contract. I/we confirm that the Bidder agrees to be bound by them. |
| <input type="checkbox"/> | <input type="checkbox"/> | I/We confirm that the Bidder has the necessary capacity, capability, and necessary licenses to fully meet or exceed the Requirements and will be available to deliver throughout the relevant Contract period. |
| <input type="checkbox"/> | <input type="checkbox"/> | Ethics: In submitting this Quote I/we warrant that the bidder: has not entered into any improper, illegal, collusive or anti-competitive arrangements with any Competitor; has not directly or indirectly approached any representative of the Buyer (other than the Point of Contact) to lobby or solicit information in relation to the RFQ ;has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the Buyer. |
| <input type="checkbox"/> | <input type="checkbox"/> | I/We confirm to undertake not to engage in proscribed practices, , or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and we have read the United Nations Supplier Code of Conduct : https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN. |
| <input type="checkbox"/> | <input type="checkbox"/> | Conflict of interest: I/We warrant that the bidder has no actual, potential, or perceived Conflict of Interest in submitting this Quote or entering a Contract to deliver the Requirements. Where a Conflict of Interest arises during the RFQ process the bidder will report it immediately to the Procuring Organisation's Point of Contact. |
| <input type="checkbox"/> | <input type="checkbox"/> | Prohibitions, Sanctions: I/We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium members or subcontractors or suppliers for any part of the contract is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists and have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. |
| <input type="checkbox"/> | <input type="checkbox"/> | Bankruptcy: I/We have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future. |

| Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Offer Validity Period: I/We confirm that this Quote, including the price, remains open for acceptance for the Offer Validity. |
| <input type="checkbox"/> | <input type="checkbox"/> | I/We understand and recognize that you are not bound to accept any Quotation you receive, and we certify that the goods offered in our Quotation are new and unused. |
| <input type="checkbox"/> | <input type="checkbox"/> | By signing this declaration, the signatory below represents, warrants and agrees that he/she has been authorised by the Organization/s to make this declaration on its/their behalf. |

Signature: _____

Name: Click or tap here to enter text.

Title: Click or tap here to enter text.

Date: Click or tap to enter a date.

ANNEX 3: TECHNICAL AND FINANCIAL OFFER - GOODS

Bidders are requested to complete this form, sign it and return it as part of their quotation along with Annex 2 Quotation Submission Form. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.

| | | |
|-----------------|----------------------------------|-------------------------------------|
| Name of Bidder: | Click or tap here to enter text. | |
| RFQ reference: | RFQ/XXXX/IND 2022 | Date: Click or tap to enter a date. |

Technical Offer

Qualification Criteria

Please fill this and attach relevant documents. Only quotations of bidders qualifying against the below criteria will be evaluated.

| Qualifying Criteria | Yes/No | List of supporting documents |
|---|--------|------------------------------|
| Bidders must have the legal capacity to enter a binding contract with ISA and to deliver in the country, or through an authorized representative. | | |
| Bidders must have the legal capacity to enter a binding contract with ISA and to deliver in the country, or through an authorized representative. Company registration certificate or any other document proving legal entity. | | |
| The bidder must have the experience of supply of solar equipment's / hardware components. Submit copy of work order or completion certificate | | |
| The bidder must have annual turnover of more than USD 100,000 - Please attach relevant documents. | | |

ISA reserves the right to reject the bid if it determines that the selected bidder has not provided the supporting documents against the Qualifying Criteria.

Technical Criteria

Provide the following:

- a brief description of your qualification and capacity that is relevant to the Scope of Works;
- a brief method statement and implementation plan;

Technical offer should encompass detailed specifications, including make, complying standards, relevant test certificate as applicable for each of the component proposed to be supplied by the bidder under the RFQ in line with the table below.

Bidder can submit the details for one or more countries. For each country, please specify the country name at the top of the table.

| Sr. | Particulars | Quantity | Detailed Specification | Make/ Model | Complying standard | Period of Warranty |
|-----|------------------|----------|------------------------|-------------|--------------------|--------------------|
| 1 | Solar PV Modules | | | | | |

| Sr. | Particulars | Quantity | Detailed Specification | Make/ Model | Complying standard | Period of Warranty |
|-----|---|----------|------------------------|-------------|--------------------|--------------------|
| 2 | Mounting support structure | | | | | |
| 3 | Weather resistant HDPE junction box (DC Distribution box and AC Distribution box) | | | | | |
| 4 | Inverter (hybrid) | | | | | |
| 5 | Battery | | | | | |
| 6 | Battery charge controller | | | | | |
| 7 | Battery cable with 20A Fuse | | | | | |
| 8 | Battery rack | | | | | |
| 9 | PV Standard 4 connector | | | | | |
| 10 | Ground fault circuit breaker | | | | | |
| 11 | Earthing kit | | | | | |
| 12 | Solar instrumentation box (tool kit) | | | | | |
| 13 | Vernier Caliper | | | | | |
| 14 | Digital multimeter | | | | | |
| 15 | Clamp meter | | | | | |
| 16 | Pyrometer | | | | | |
| 17 | Wind speed sensor | | | | | |
| 18 | Measuring tape | | | | | |
| 19 | Spirit level | | | | | |
| 20 | Compass | | | | | |
| 21 | Pathfinder | | | | | |
| 22 | Cable Cutter | | | | | |
| 23 | Insulation tester | | | | | |
| 24 | IV Curve Tracer | | | | | |
| 25 | PV Solar Energy Advanced Trainer | | | | | |
| 26 | Solar Energy Demonstrator | | | | | |
| 27 | Cables | | | | | |

| Sr. | Particulars | Quantity | Detailed Specification | Make/ Model | Complying standard | Period of Warranty |
|-----|--------------------------|----------|------------------------|-------------|--------------------|--------------------|
| 28 | Soldering iron and plugs | | | | | |
| 29 | PPE kit | | | | | |

List of additional items to be considered for Cuba

| Sr. | Particulars | Quantity | Unit Price (USD) | Total Price (USD) |
|-----|---|----------|------------------|-------------------|
| 1 | PV reference module | | | |
| 2 | Spectroradiometer to measure the solar spectral distribution between 300 and 2500nm | | | |
| 3 | Infrared Camera PV Inspection | | | |
| 4 | Professional single-handed 3-axis gimbal | | | |
| 5 | Four-Quadrant Bipolar Power Supply for PV I-V curve analysis | | | |
| 6 | DAQ device with 8 SE simultaneous analog inputs | | | |
| 7 | Small Area Solar Simulator | | | |
| 8 | Solar pumping demonstrative system | | | |
| 9 | Air Conditioning Unit | | | |
| 10 | Adapter, 10/100 RJ45 Ethernet to 2 x RS422/RS485 Serial | | | |

The submission of proposal should highlight in subject line “SITC for equipment in Ethiopia, Cuba and Kiribati Is”

Financial Offer

Bidders can quote for any of the three countries or for all countries based on their interest.

Bidders shall submit separate financial offer for each country they quote. For each country, please specify the country name at the top of the table.

Financial offer should encompass the quantity and price as applicable for each of the component proposed to be supplied by the bidder under the RFQ in line with the table below:

Submission for the Country.....*(fill the country name)*

| Sr. | Particulars | Quantity | Unit Price (USD) | Total Price (USD) |
|-----|---|----------|------------------|-------------------|
| 1 | Solar PV Modules | | | |
| 2 | Mounting support structure | | | |
| 3 | Weather resistant HDPE junction box (DC Distribution box and AC Distribution box) | | | |
| 4 | Inverter (hybrid) | | | |
| 5 | Battery | | | |
| 6 | Battery charge controller | | | |
| 7 | Battery cable with 20A Fuse | | | |
| 8 | Battery rack | | | |
| 9 | PV Standard 4 connector | | | |
| 10 | Ground fault circuit breaker | | | |
| 11 | Earthing kit | | | |
| 12 | Solar instrumentation box (tool kit) | | | |
| 13 | Vernier Caliper | | | |
| 14 | Digital multimeter | | | |
| 15 | Clamp meter | | | |
| 16 | Pyrometer | | | |
| 17 | Wind speed sensor | | | |
| 18 | Measuring tape | | | |

| Sr. | Particulars | Quantity | Unit Price (USD) | Total Price (USD) |
|-----|----------------------------------|----------|------------------|-------------------|
| 19 | Spirit level | | | |
| 20 | Compass | | | |
| 21 | Pathfinder | | | |
| 22 | Cable Cutter | | | |
| 23 | Insulation tester | | | |
| 24 | IV Curve Tracer | | | |
| 25 | PV Solar Energy Advanced Trainer | | | |
| 26 | Solar Energy Demonstrator | | | |
| 27 | Cables | | | |
| 28 | Soldering iron and plugs | | | |
| 29 | PPE kit | | | |

List of additional items to be considered for Cuba. These items are in addition to the above items for Cuba only.

| Sr. | Particulars | Quantity | Unit Price (USD) | Total Price (USD) |
|-----|---|----------|------------------|-------------------|
| 1 | PV reference module | | | |
| 2 | Spectroradiometer to measure the solar spectral distribution between 300 and 2500nm | | | |
| 3 | Infrared Camera PV Inspection | | | |
| 4 | Professional single-handed 3-axis gimbal | | | |
| 5 | Four-Quadrant Bipolar Power Supply for PV I-V curve analysis | | | |
| 6 | DAQ device with 8 SE simultaneous analog inputs | | | |
| 7 | Small Area Solar Simulator | | | |
| 8 | Solar pumping demonstrative system | | | |
| 9 | Air Conditioning Unit | | | |

| Sr. | Particulars | Quantity | Unit Price (USD) | Total Price (USD) |
|-----|---|----------|------------------|-------------------|
| 10 | Adapter, 10/100 RJ45 Ethernet to 2 x RS422/RS485 Serial | | | |

| SL NO. | BRIEF DESCRIPTION OF GOODS/ SERVICES | Price in USD | Customs duty/excise duty/other taxes* |
|--|---|--------------|---------------------------------------|
| 1 | Component A: Supply of required solar equipment's* (As detailed out above) and Installation & Commissioning | | |
| 2 | Component B: Training Charges | | |
| 3 | Component C: Comprehensive maintenance of the system for the period of one year form the date of commissioning. | | |
| Total Price | | | |
| Transportation Price (up to delivery site) | | | |
| Insurance Price (up to delivery site) | | | |
| Other Charges (specify) | | | |
| Total Final and All-inclusive Price | | | |

- Please provide details of the nature of the taxes. Taxes will be paid on actual basis on submission of documents proving the nature and the amount of tax.

ISA will evaluate the financial offers received from the bidders on the basis of total quoted price excluding tax.*ISA reserves the rights to select/deselect items from list of equipment's.

Compliance with Requirements

| | You Responses | | |
|---------------------------------------|--------------------------|--------------------------|---|
| | Yes, we will comply | No, we cannot comply | If you cannot comply, pls. indicate counter - offer |
| Minimum Technical Specifications | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |
| Delivery Term (INCOTERMS) | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |
| Delivery Lead Time | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |
| Warranty and After-Sales Requirements | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |
| Validity of Quotation | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |
| Payment terms | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |
| Other requirements [pls. specify] | <input type="checkbox"/> | <input type="checkbox"/> | Click or tap here to enter text. |

Other Information:

| | |
|---|----------------------------------|
| Estimated weight/volume/dimension of the Consignment: | Click or tap here to enter text. |
| Country/ies of Origin: | Click or tap here to enter text. |

(if export licence required this must be submitted if awarded the contract)

I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted.

Exact name and address of company

Company NameClick or tap here to enter text.

Address: Click or tap here to enter text.

Click or tap here to enter text.

Phone No.:Click or tap here to enter text.

Email Address:Click or tap here to enter text.

Authorized Signature:

Date:Click or tap here to enter text.

Name:Click or tap here to enter text.

Functional Title of Authorised

Signatory:Click or tap here to enter text.

Email Address: Click or tap here to enter text.

ANNEX 4: DESCRIPTION OF SOLAR TRAINER AND DEMONSTRATOR

SOLAR ENERGY TRAINER

Small and compact in design for easy use in the classroom and remote sites. Introduction to solar thermal (hot water) and solar photovoltaic systems. Introduction the Kcal (BTU) measurements and calculate the heat absorbing capacity of solar panels. Familiarization with flow meters and electronic thermometers which are provided on the control panel. Comparison output and efficiency of different configurations by assembling the collectors using the interchangeable parts.

Model may vary as per the items available in the market.



SOLAR ENERGY DEMONSTRATOR

Introduce students to the generation of electrical power from the sun via solar photovoltaic cells. Study of electrical solar energy technology by explaining how the solar cells work, battery storage techniques and conversion from DC to AC power.

Model may vary as per the items available in the market.



ANNEX 5: CHECKLIST FOR SUBMISSION OF BID

| Item | Yes, we have submitted | If you cannot submit, pls. indicate the reason |
|--|--------------------------|--|
| Technical Proposal | <input type="checkbox"/> | Click or tap here to enter text. |
| Filled up Annex 2 and Bidder Declaration form | <input type="checkbox"/> | |
| Registration Certificate | <input type="checkbox"/> | |
| Annual Turnover Certificate | <input type="checkbox"/> | |
| Documents against Qualifying criteria as per Annexure-3 | <input type="checkbox"/> | |
| | | |
| Financial Proposal | <input type="checkbox"/> | Click or tap here to enter text. |
| Quoted prices for all items in the list | <input type="checkbox"/> | |
| Quoted prices for Transportation (up to the delivery site) | <input type="checkbox"/> | |
| Quoted prices for Insurance (up to the delivery site) | <input type="checkbox"/> | |
| Quoted prices for VAT or other taxes and duties | <input type="checkbox"/> | |

The submission of proposal should highlight in subject line “STC for equipment in Ethiopia, Cuba and Kiribati Is”