AFRICAN ENTERPRISE CHALLENGE FUND (AECF)

TENDER DOCUMENT

TENDER NO: AECF/KKCF/SOLAR-PV/01/2026

TENDER NAME: SUPPLY, DELIVERY, INSTALLATION, TESTING, AND COMMISSIONING OF A HYBRID SOLAR PV SOLUTIONS IN TURKANA COUNTY, KENYA

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SECTION 1. INVITATION TO TENDER

The African Enterprise Challenge Fund (AECF) invites bids from eligible, qualified, and experienced firms for the supply, delivery, installation, testing, and commissioning of a hybrid solar PV solution in Turkana County, Kenya.

SECTION 2. BACKGROUND INFORMATION

1.0 The Africa Enterprise Challenge Fund

The AECF is a leading development organization that supports innovative enterprises in the agribusiness and renewable energy sectors to reduce rural poverty, promote climate-resilient communities, and create jobs.

We catalyze the private sector by surfacing and commercializing new ideas, business models, and technologies that increase agricultural productivity, improve farmer incomes, expand access to clean energy, reduce greenhouse gas emissions, and enhance resilience to the effects of climate change. We finance high-risk businesses that struggle to access commercial funding; we are committed to working in frontier markets, fragile contexts, and high-risk economies where few mainstream financing institutions dare to go.

To date, we have supported over 576 businesses in 26 countries in Sub-Saharan Africa, impacted more than 35 million lives, and created over 35,000 direct jobs.

AECF is headquartered in Kenya with offices in Côte d'Ivoire, Tanzania, Nigeria, South Sudan, Benin, and Somalia.

2.0 About Kakuma Kalobeyei Challenge Fund (KKCF)

The Kakuma Kalobeyei Challenge Fund (KKCF) is a five-year Program of the International Finance Corporation (IFC), implemented with the Africa Enterprise Challenge Fund (AECF), the Turkana County Government, and UNHCR. KKCF is based on market data from IFC's "Kakuma as a Marketplace" study, which quantified Kakuma's economy and confirmed that it is a dynamic and promising marketplace. This sparked significant interest, which contributed to KKCF's conceptualization and Program development.

KKCF is designed to support private-sector investment and unlock the economic potential of refugees and their hosts in the Kakuma Kalobeyei refugee hosting area in Turkana West District, Turkana County. KKCF aims to attract private companies and grow local entrepreneurial potential to create job opportunities, offer more consumer choices, and support fair pricing for products

and services. KKCF targets companies of all sizes, from small to medium-sized family businesses to social enterprises and large firms. For more information, visit https://kkcfke.org/

KKCF uses a competitive financing mechanism to disburse donor funding and incentivize companies to start or scale existing operations in the Kakuma-Kalobeyei area. The process begins by advertising a call for proposals, and applicants are then subjected to a competitive selection process, leading to the identification of companies best aligned with the Kakuma-Kalobeyei market dynamics to deliver the intended socio-economic impact to the host and refugee communities while also contributing to the development of Turkana County.

With the Kakuma-Kalobeyei area being a marginalized and fragile setting, KKCF supports these companies to manage business limitations prevalent in such challenging environments, including limited access to financing, low availability of technically qualified and experienced staff, complex social and cultural conditions, a slow and bureaucratic regulatory environment, and fragmented, low-income, and remote markets with poor infrastructure. KKCF support includes concessional capital, technical assistance, and policy advocacy to improve the business environment. This collaborative Program focuses on building commercially viable and sustainable businesses that can:

- Increase income for both refugees and host communities.
- Provide essential goods and services.
- Create jobs and stimulate economic growth.
- Improve living standards for those in the refugee camp and surrounding communities.
- Promote financial inclusion efforts focused on increasing access to finance for women and youth.

KKCF is currently working with 105 commercially viable and sustainable microenterprises and 19 Small and Medium Enterprises (SMEs) across diverse economic sectors.

SECTION 3. OBJECTIVES OF THE PROJECT

The AECF is procuring the services of qualified Energy Service Companies (ESCOs) to provide turnkey solar PV systems for seven SMHEs in Kakuma Kalobeyei, as listed below.

Table 1. List of SMHEs and system sizes

SMHEs	PV Modules	Battery Storage	Installation
1	69 kWp	185kWh	Ground mount
2	12 kWp	40 kWh	Roof top mount
3	60 kWp	80 kWh	Ground mount
4	42 kWp	70 kWh	Ground mount
5	100 kWp	180 kWh	Ground mount
6	90 kWp	100 kWh	Ground
7	80 kWp	50 kWh	Ground & roof mount

SECTION 4. TENDER-SPECIFIC PROVISIONS

This section sets out additional provisions and compliance requirements applicable to the tender for the design, supply, delivery, installation, testing, commissioning, and handover of a solar system. All bidders and contracted personnel must comply with these conditions.

1. Integrity, Ethics, and Sanctions Compliance

i. Bidders must conduct their activities with the highest standards of integrity and professional ethics.
ii. Bidders and personnel shall avoid fraud, corruption, collusion, coercion, obstruction, money laundering, and any sanctionable practices.
iii. Each bidder must submit a signed Declaration of Undertaking confirming that neither the firm, its affiliates, nor its personnel has engaged in sanctionable practices and is not listed on international sanctions lists.
iv. The AECF reserves the right to verify statements and reject any bidder found in breach.

2. Exclusion List and Environmental & Social (E&S) Compliance

i. All due diligence must comply with applicable national E&S legislation and relevant international standards, including the IFC Performance Standards.
ii. Bidders must submit an E&S Compliance Statement confirming adherence to these requirements.
iii. The Environmental and Social Due Diligence (ESDD) must identify potential exclusion risks, assess compliance with national laws, and reflect good international industry practice.

3. Conflict of Interest and Independence

i. Bidders must declare any actual or potential conflicts of interest, including financial, professional, or personal relationships with the SMHE's or AECF staff.
ii. All service providers engaged for this assignment shall sign a Conflict of Interest and Confidentiality Declaration, and Declaration of Undertaking before commencement.

4. Confidentiality and Data Protection

i. All information obtained during the tender process and execution is confidential and must not be disclosed without written authorization.
ii. Bidders and the AECF shall comply with applicable data protection and privacy regulations.
iii. All reports, data, and outputs produced during the assignment remain the property of the AECF.

5. Subcontracting and Key Experts

i. Any subcontracting must be disclosed in the proposal and approved by the AECF.
ii. Key experts may not be replaced without prior written consent; replacements must have equivalent or superior qualifications.

6. Insurance, Liability, and Health & Safety

i. The bidder shall maintain adequate professional indemnity, travel, and health insurance for all personnel involved.
ii. On-site activities must comply with health and safety regulations to ensure staff safety and welfare.
iii. The AECF shall not be liable for injuries, losses, or damage incurred during execution, except as provided in the contract.

7. Monitoring, Reporting, and Donor/Client Coordination

i. The contractor shall provide regular progress updates to the AECF.
ii. The AECF reserves the right to review and request revisions to ensure compliance with donor/client requirements and contract terms.

SECTION 5. SCOPE OF WORK

Small and medium hospitality enterprises (SMHEs) in Kakuma and Kalobeyei play a critical role in serving both refugees and host communities. These businesses, which include hotels, lodges, restaurants, and community event facilities, face high operating costs driven by energy-intensive services such as cooling, refrigeration, cooking, and laundry, which face persistent energy challenges: unreliable grid supply, dependence on costly diesel generators, and rising operating expenses. Energy can account for 30–45% of a hotel's total operating costs.

SMHEs have limited access to affordable capital for renewable energy upgrades. Yet, stand-alone or hybrid solar systems could potentially reduce energy costs by 70–80%, improve reliability, and reduce carbon emissions — while increasing operational self-sufficiency for continued service in marginalized and fragile settings. Supporting them in transitioning to clean, affordable solar energy will strengthen their operational resilience, unlock growth opportunities, and better contribute to local economic development in the area.

Scope of Services

The successful bidder shall be responsible for end-to-end implementation, including but not limited to:

- Design and Engineering
- Load assessment and demand forecasting
- Detailed system design and drawings
- System sizing for PV array, inverters, batteries, and distribution network
- Protection, metering, and monitoring system design
- Supply, installation, testing, commissioning, handover, and provide after-sales service.

The systems shall be engineered for high reliability, safety, and long-term performance under Kakuma Kalobeyei climatic conditions.

Specific duties and responsibilities (the “Services”) of the ESCO

The ESCO shall be responsible for the "Turnkey" delivery of the systems, including:

i. **Detailed Site Assessment & Engineering Design:** Conduct final load audits for the 5 SMHEs and produce detailed engineering designs (PVSyst reports, Single Line Diagrams, and structural drawings) optimized for HV LFP battery integration.
ii. **Procurement & Logistics:** Source Tier 1 components (as specified in Annex A Section 17) and manage the logistics of transporting equipment to Turkana West - Kakuma.

iii. **Installation & Commissioning:** Execute high-quality installation of ground and roof-mounted arrays, inverter-chargers, and HV battery stacks. Perform rigorous commissioning tests (insulation, earthing, and performance ratio tests).

iv. **Remote Monitoring Integration:** Install and configure a cloud-based monitoring system for each site, providing AECF and the SMHEs with real-time data on generation, consumption, and battery State of Health (SoH).

v. **Operation & Maintenance (O&M) Setup:** Provide a 6-month defects liability period and establish a preventative maintenance schedule.

vi. **Capacity Building:** Conduct on-site training for SMHE staff on basic system troubleshooting and safety.

4. **System Specifications**

All equipment and work shall comply with national electrical and building codes, applicable regulations, and IEC standards. They shall include high-efficiency PV modules, HV LFP batteries, HV hybrid inverters, corrosion-resistant mounting structures, electrical protection systems, and remote monitoring platforms.

4.2 Supply and Delivery

- Solar PV modules (Tier 1 recommended)
- Battery energy storage system (Lithium-ion or approved equivalent)
- Inverters, charge controllers, and balance of system
- All mounting structures and accessories

4.3 Installation and Construction

- Site preparation and civil works
- PV array installation
- Battery and inverter installation
- Distribution network construction
- Customer connections

4.4 Testing and Commissioning

- Factory and site acceptance testing
- System performance verification
- Grid stability and safety testing
- Final commissioning and handover

4.5 Training and Documentation

- Training of local operators and technicians
- User manuals and O&M manuals
- As-built drawings *(An updated, final version of construction plans that show a project exactly as it was built, documenting all changes, modifications, and deviations from the original design for future maintenance, renovations, and operations)*
- Warranty documentation

4.6 Operation & Maintenance Support

- Defects liability period (minimum 6 months)
- Routine maintenance schedule
- Technical support during warranty period

TECHNICAL REQUIREMENTS

Component	**Minimum Requirement**
PV Modules	IEC 61215 & IEC 61730 certified
Batteries	IEC 62619 compliant
Inverters	Grid-forming capable
Monitoring	Remote monitoring & data logging

SECTION 6. ELIGIBILITY AND QUALIFICATION REQUIREMENTS

Mandatory Criteria

Bidders must provide:

1. **Certificate of Incorporation/Registration**
2. **Valid Tax Compliance Certificate**
3. **Sector license**
    - **EPRA Solar PV License: You must have a valid Solar PV Contractor License (Class V2).**

- **EPRA Technician License: Copy of the practicing license for the Solar Technician (Class T3).**
- **NCA Registration: Valid registration with the National Construction Authority (NCA) in Electrical Engineering Services (Solar sub-class) Category NCA 4 as well as Civil Engineering Category NCA 6.**

4. **Audited financial statements for the last 2 years**
5. **Evidence of similar projects completed**
6. **CVs of key technical personnel and their licenses attached**
7. **Manufacturer authorization letters**
8. **Health, Safety, and Environmental (HSE) policy**
9. **A signed Declaration of Undertaking -**

SECTION 7. QUALIFICATIONS AND EXPERIENCE

I. Technical Capacity and Experience

- Minimum 10 years of experience delivering commercial, industrial, or mini-grid solar installations.
- At least 5 completed hybrid solar PV projects (>50 kW) within the past 5 years within the sector in similar context.
- Demonstrated capability in system sizing, hybrid design, and remote monitoring.
- Certified technical staff (EPRA T3 license or equivalent).
- Certified contractor (EPRA V2).
- Readiness to deploy within 4 weeks of contracting and ability to complete within 3 months of award.
- Execution and supervision capacity to implement multiple sites (>7) of complex hybrid systems in remote locations.

II. Financial Capacity and Stability

- Evidence of financial stability through audited financial statements (for the last 2 years).
- Ability to pre-finance installations considering the milestone-based payment plan.
- Adequate liquidity and working capital to deliver multiple projects concurrently (bank evidence showing capacity of KES 25 million facility).

III. Quality of Engineering Design

- Detailed load assessment and site-specific system sizing.
- System design compliant with IEC, IEEE, and national standards.
- Inclusion of adequate protection systems and high-quality components.
- Robust O&M plan covering preventive and corrective maintenance.
- Strong warranties: PV modules (10–12 years), inverters (5 years), batteries (5–8 years).
- Manufacturer authorization letters for key equipment.

IV. After-Sales Service and Local Presence

- Capacity to provide local service within 48–72 hours.
- Evidence of or commitment to establishing a presence in Turkana County.
- Plan to train and integrate local technicians, including youth and refugees.

V. Risk Management

- Experience working in frontier, humanitarian, or fragile markets.
- Proven strategies for managing demand risk and payment risk.
- Capacity to handle logistics, security, and harsh climate conditions.

VI. Value for Money

- Competitive pricing relative to quality and system performance.
- Clear cost tabulation and justification.
- Use of Tier 1 components and reputable brands.

VII. Legal and Compliance Requirements

- Compliance with environmental, social, and labour standards.
- Commitment to gender inclusion in staffing and training.
- Plan for involving local suppliers and community actors.

VIII. Legal and Compliance Requirements

- Valid EPRA solar contractor license (T3 for large systems).
- Tax compliance certificate and relevant statutory documents.
- Understanding EPRA, NEMA, and county-level requirements.

IX. Past Performance & Client References

- Minimum 3 references from similar C&I or hybrid installations.
- Demonstrated operational performance of systems installed for over 12 months.
- No record of major disputes, contract failures, or regulatory issues.

SECTION 8. MANDATORY SITE VISIT & PRE-TENDER MEETING

1.1. The Bidder or their authorized representative **MUST** attend a mandatory site visit and pre-tender meeting where technical measurements /or parameters must be ascertained, scheduled for **10 th February 2026** at **10:00 am EAT** at **AECF Kakuma Office** at the bidders cost.

1.2. The purpose of the site visit is for the Bidder to examine the site of the works and its surroundings to obtain all technical information necessary for preparing a responsive bid. This includes, but is not limited to:

- Assessment of roof structural integrity and available mounting space.
- Shading analysis from nearby trees, buildings, or obstructions.
- Evaluation of existing electrical infrastructure for interconnection.
- Logistical constraints for the delivery and storage of solar components.

1.3. **Proof of Attendance:** Bidders will sign a **Site Visit Register** provided by the AECF.

1.4. **Disqualification:** Failure to attend the mandatory site visit will lead to **automatic disqualification** at the preliminary evaluation stage.

1.5. **Liability:** The costs of visiting the site shall be at the Bidder's own expense. The AECF shall not be liable for any misunderstanding or misapprehension regarding site conditions after the tender has been submitted.

SECTION 9. TENDER SUBMISSION REQUIREMENTS

Bidders shall submit:

a. Technical Proposal

Understanding of the assignment

- Technical design and methodology - A detailed statement explaining how the vendor will install, test, and commission the system.
- Work plan and implementation schedule showing the timeline from delivery to commissioning
- Equipment Specs - Detailed brochures and technical data sheets in English for: Solar Panels, Inverters, Batteries, and Mounting Structures.
- Risk assessment and mitigation measures
- Environmental and social safeguards
- Warranty - Commitment to manufacturer warranties (e.g., 25 years for panels, 5–10 years for inverters).
- After-Sales - A proposed Service Level Agreement (SLA) or maintenance plan for 1–2 years post-installation.
- Defects Liability Period (minimum 6 months)
- Testing, commissioning, and handover
- Training and documentation

Installation & Commissioning Standards

Specific technical tests vendor must provide:

- **I-V Curve Testing:** To verify panel performance.
- **Insulation & Continuity Tests:** For electrical safety.
- **Earthing:** Soil resistivity tests and installation of a proper earth mat.

b. Financial Proposal

- Detailed Bill of Quantities (BoQ)
- Breakdown of costs (supply, installation, commissioning)
- Taxes and duties (clearly indicated). The financial proposal should stipulate the consultancy fees and all associated costs for the assignment, expressed in Kenya Shillings (Kshs.) and inclusive of applicable taxes.

The technical and financial proposals are to be submitted separately in pdf format.

SECTION 10. IMPLEMENTATION SCHEDULE

Maximum implementation period: 3 months

Phase	**Duration**
Design & Approvals	1 month
Supply & Logistics	2 months
Installation	3 months
Testing & Commissioning	1 month
Training & Handover	1 month
Contingency	1 month

SECTION 11. EVALUATION CRITERIA

Proposals will be evaluated based on a **Quality and Cost-Based Selection** method (80% Technical, 20% Financial).

Technical Evaluation (70%)

No.	Evaluation Cluster & Criteria	Score Breakdown	Max Score
1.0	**Technical Excellence & Experience**		**35**
	Technical Capacity & Experience: Evaluation of key personnel (T3/V2 licenses) and the firm's track record in projects >50kWp. *Past Performance & Client References:* Verification of 3+ references for systems operational for over 12 months Valid EPRA licenses, NCA Certification, Tax compliance, and NEMA	20 Marks	
	Quality of Engineering Design: Assessment of the proposed technical solution, HV LFP battery integration, and remote monitoring setup.	15 Marks	
2.0	**Implementation & Operational Sustainability**		**25**
	After-Sales Service & Local Presence: Ability to respond within 48–72 hours.	10 Marks	
	Risk Management: Logistics plan for fragile markets and strategies for harsh climate/security conditions.	10 Marks	
	ESG, Gender & Inclusion: Plan for local job creation and gender-inclusive staffing.	5 Marks	
3.0	**Institutional Readiness & Financial Stability**		**20**
	Financial Capacity & Stability: Audited accounts and evidence of Ksh. 30,000,000 liquidity/credit for pre-financing.	20 Marks	
	TOTAL TECHNICAL SCORE		**80**

*The minimum technical score to proceed to financial evaluation is **56/80 (70%)**. Only bids that meet the minimum technical threshold will proceed to financial evaluation.*

SECTION 12. PERIOD OF VALIDITY OF PROPOSALS

Proposals shall remain valid for **[90]** calendar days after the AECF's proposal submission deadline. A proposal valid for a shorter period may be rejected as non-responsive.

In exceptional circumstances, before the expiration of the original proposal's validity period, the AECF may request that the Bidders extend the validity period for a specified additional period. The request and the responses thereto shall be made in writing.

A Bidder agreeing to the request will not be required or permitted to modify its technical or financial proposal but will be necessary to extend the validity of its **Performance Bond** for the period of the extension.

The price quoted in the financial proposal shall remain fixed and firm for the duration of the validity period and any subsequent contract resulting from this tender. No price variations due to currency fluctuations, increases in material costs (e.g., solar cells, aluminum, or batteries), or labor rates will be entertained during the validity period.

SECTION 13. PERFORMANCE BOND CLAUSE

1. Provision of Performance Security

Within seven **[7] days** of receipt of the Letter of Acceptance, the Contractor shall provide the Employer with a Performance Bond in the amount of **[10%]** of the Total Contract Price.

2. Form and Validity

The Performance Bond shall be issued by a reputable bank or financial institution under the control and regulation of the Central Bank of Kenya and acceptable to the AECF and shall be in the form of an **unconditional, irrevocable, and on-demand** bank guarantee. It shall remain valid until the issuance of the **Final Handover Certificate** and the successful completion of all commissioning tests.

3. Purpose of the Bond

The Bond shall serve as security for the Contractor's faithful performance of all obligations under the Contract, including but not limited to:

- Timely **supply and delivery** of all components.
- Professional **installation** in accordance with technical specifications.
- Successful **testing and commissioning** of the system.
- Rectification of any defects identified before final **handover**.

4. Claims Against the Bond

The AECF shall be entitled to claim the Performance Bond if the Contractor fails to remedy a breach of contract within **[7 days]** of receiving a written notice to do so. This includes, without limitation:

- Failure to meet project milestones.
- Failure of the equipment to pass commissioning tests.
- Abandonment of the site before formal handover.

5. Release of Bond

The Performance Bond shall be released to the Contractor within **[30 days]** following the issuance of the Final Handover Certificate, subject to the provision of a separate **Warranty/Defects Liability Bond** to cover the maintenance period.

SECTION 14. INSURANCE OF PERSONNEL

The successful bidder shall, at its own cost, procure and maintain valid and adequate insurance cover for all personnel engaged in the supply, delivery, installation, testing, commissioning, and handover of the solar system under this Contract. Such insurance shall comply with all applicable laws of Kenya, including but not limited to the Work Injury Benefits Act (WIBA), the Occupational Safety and Health Act (OSHA), and any other statutory requirements relevant to the works. The successful bidder shall submit documentary evidence of such insurance to the AECF prior to commencement of works and shall ensure that the insurance remains valid for the entire duration of the Contract.

Non-Compliance and Consequences Clause

Failure by the Contractor to procure, maintain, or provide evidence of the required insurance cover shall constitute a material breach of contract. In such an event, the AECF reserves the right to suspend the works, withhold payments, or terminate the Contract in accordance with the provisions AECF Procurement Policy and Donor guidelines and the Contract Conditions, without prejudice to any other remedies available under the law.

SECTION 15. CONTRACT PERIOD

The expected contract duration is 90 days (3 months) from the date of contract signing, including commissioning and effective handover.

SECTION 16. PAYMENT TERMS ACCEPTANCE OF DELIVERABLES

Payments will be made upon AECF's approval of deliverables in accordance with the agreed schedule. Deliverables must be formally accepted before payment is made. The contract shall define milestones, acceptance criteria, and procedures for addressing delays or non-performance.

- 10% upon contract signing
- 40% upon delivery of equipment
- 40% upon installation completion
- 10% after successful commissioning, handover, and the end of the defect's liability period.

SECTION 17. CONFIDENTIALITY AND ETHICS

Bidders shall observe the highest standards of ethics and integrity. AECF has a zero-tolerance policy on corruption, fraud, and collusion.

SECTION 18. REPORTING LINES

The ESCO shall report directly to the KKCF Project Manager, in regular consultation with AECF's Head of Procurement. Progress updates will be provided consistently throughout the engagement period.

SECTION 19. TENDER SUBMISSION DEADLINE

Application Details

The AECF is an Equal Opportunity Employer. The AECF considers all interested candidates based on merit, without regard to race, gender, color, national origin, religion, sexual orientation, age, marital status, veteran status, disability, or any other characteristic protected by applicable law. The AECF invites qualified consultants/firms to send a proposal to aecfprocurement@aecfafrica.org marked **"SUPPLY, DELIVERY, INSTALLATION, TESTING, AND COMMISSIONING OF HYBRID SOLAR PV SOLUTIONS IN TURKANA COUNTY, KENYA".** The AECF shall not be liable for failing to open proposals submitted under a different subject.

Clarification requests must be submitted to the designated Procurement Department via email to aecfprocurement@aecfafrica.org no later than seven (7) days before the submission deadline. That is by **12th February 2026, 5 PM (EAT).** All clarifications and any addenda will be issued to all registered bidders to ensure equal access and transparency.

The proposal should be received no later than **19th February 2026 by 5.00 pm East Africa Time (GMT +3),** addressed to the AECF Procurement Department.

Disclaimer

AECF reserves the right to determine the structure of the process, the number of short-listed participants, the right to withdraw from the proposal process, the right to change this timetable at any time without notice and reserves the right to withdraw this tender at any time, without prior notice and without liability to compensate and/or reimburse any party.

Important Note:

- The AECF does **not require any application fee** to participate in this tendering process.
- The AECF has **not appointed any agents or intermediaries** to facilitate applications. Candidates should contact the Procurement Department directly for any clarifications.

RESERVATION OF RIGHTS

The AECF reserves the right to:

- Accept or reject any tender
- Annul the tendering process
- Not be bound to accept the lowest or any tender

SECTION 20. ANNEX A: TECHNICAL SCHEDULE

Below are the technical requirements for PV modules, batteries, inverters, mounting structures, electrical balance-of-systems, performance guarantees, testing and commissioning, monitoring, HSE, documentation, and warranties.

4.1 Solar PV Modules

The ESCO shall supply and install solar modules meeting the following minimum requirements

- Minimum module efficiency: ≥ 20%)
- Certification: IEC 61215 / IEC 61730
- Annual degradation rate: ≤ 0.55%%
- Product warranty: minimum 10–12 years)
- Performance warranty: minimum 25 years)
- Resistance to PID

4.2 Battery Energy Storage

Each system shall include a High Voltage Lithium Iron Phosphate battery (HV LFP battery system with:

- Minimum usable capacity to meet site demand profiles as provided below.
- Minimum depth of discharge: ≥ 90%)
- Round-trip efficiency: ≥ 95%)
- Integrated Battery Management System (BMS)
- Compliance with IEC 62619 / UL 1973 safety standards
- Built-in protections against over-charge, over-discharge, and thermal runaway
- Warranty: minimum 8–10 years or equivalent cycle life

4.3 HV Hybrid Inverters,

Hybrid inverters shall meet the following minimum requirements:

- Rated capacity of not less than 80% of the installed PV capacity
- Conversion efficiency: ≥ 95%
- Compliance with IEC 62109 and IEC 61727
- Anti-islanding protection and grid support functions where applicable
- Black-start capability

4.4 Mounting structures

Mounting systems shall:

- Be suitable for the proposed installation as listed in Table 1 of the TOR
- Be designed to withstand local wind and environmental conditions
- Use corrosion-resistant materials

- Have a minimum design life of 25 years

4.5 Electrical Balance of System

The ESCO shall provide all necessary electrical components, including:

- DC and AC cabling compliant with IEC 60364.
- Surge protection devices (SPDs) on DC and AC sides.
- Proper earthing and lightning protection.
- DC and AC isolators and protection relays.

4.6 Monitoring and Data Systems

Each installation should include a remote monitoring platform that provides:

- Real-time performance data.
- Fault and outage alerts.
- Data storage for a minimum of five (5) years.
- Data export capability in common formats.
- Access rights for AECF and the respective SMHEs

To print on Company Letterhead

SECTION 21. Declaration of Undertaking

Reference name of the Application/Offer/Contract: ("Contract") **Tender name: supply, delivery, installation, testing, and commissioning of a hybrid solar PV solutions in Turkana County, Kenya**

To: The AECF, LLC (AECF)

1. We (including any members of our Joint Venture and any proposed or engaged subcontractors) hereby confirm that we will abide with the criteria specified in this Bidding/Tender Document:

2. We (including any members of our Group of companies or Joint Venture and any proposed or engaged sub-contractors) further declare that during the Tender Process, and in case of being awarded a contract during contract performance:

A. did not and will not engage in any Sanctionable Practice as defined below under this clause titled “Debarment of Firms”.

Debarment of firms

AECF’s policy is to take reasonable preventive measures to ensure that we do not support individuals or organizations that are debarred, suspended, or associated with terrorism.

I. A firm shall be debarred from doing business with AECF:
   a) If it comes to the knowledge of AECF that the firm or individual has, in the past three years, been debarred by any national government, the World Bank Group, International Finance Corporation (IFC), European Union (EU) or the United Nations (UN).
   b) If the firm is involved in “fraudulent practice” or “corrupt practice”.
   c) If in the performance of a contract, the firm was engaged in illegal or unethical practices; and
   d) If the firm fails to comply with AECF Business Conduct and Ethics Policy

II. Additional exclusion criteria apply for bidders who are:
   a) Bankrupt, being wound up, or in receivership.
   b) Convicted of criminal organization involvement, money laundering, terrorist offenses, child labour, or human trafficking.
   c) Subject to UN, EU, IFC or World Bank sanctions
   d) Convicted of sanctionable practices in procurement processes.
   e) Subject to contract termination for significant contractual failures within the past five years
   f) In breach of fiscal obligations regarding tax payments

N/B: AECF will verify bidder eligibility against the World Bank debarment list and other relevant exclusion databases before contract award.

B. Commit ourselves to complying with and ensuring that our Subcontractors and major suppliers under the Contract comply with international environmental and labour standards, consistent with laws and regulations applicable in the country of implementation of the Contract and the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties.

   Moreover, we shall implement environmental and social risks mitigation measures when specified in the relevant environmental and social management plans and as required in the AECF Environmental and Social Policy or other similar documents provided by AECF and, in any case, implement measures to prevent sexual exploitation and abuse and gender-based violence.

Name: _____ In the capacity of: _____

Duly empowered to sign in the name and on behalf of:_____

Signature: Place: Dated: