



SIFA FM STATIONS LIMITED

A wholly owned subsidiary of Trans World Radio Kenya

REQUEST FOR QUOTATION

Design, Supply, Installation, Testing, Commissioning and Maintenance of Solar Photovoltaic and Battery Energy Storage Systems for Fourteen Broadcast and Support Sites

The SIFA FM 100 Per Cent Green Energy Programme

RFQ Reference: [SIFA/RFQ/SOLAR/2026/03]

Date of issue: **30 July 2026**

Deadline for submission: **Wednesday, 30th September 2026, 5.00 pm East Africa Time**

Procurement contact: **procurement@twr.co.ke**

1. Introduction and Background

1.1 SIFA FM Stations Limited (“the Employer”), a wholly owned subsidiary of Trans World Radio Kenya, operates a network of FM radio stations and transmission sites across Kenya’s arid and semi arid counties, together with a head office in Nairobi. The network serves approximately 6.5 million daily listeners in more than ten local languages.

1.2 The network comprises fourteen operational sites in eight counties: combined studio, office and transmission sites at Kakuma (Atoo FM) and Garissa (Hekima FM); studio and office sites at Voi, Marsabit, Lodwar (Maata FM) and Lamu; transmission sites at Vuria, Lodwar, Marsabit, Hindi (Lamu), Wajir, Loyangalani and Mandera; and the head office in Nairobi.

1.3 The Employer intends to convert the entire network to solar primary power, so that under normal operating conditions every site runs one hundred per cent on solar generation with lithium battery storage. The existing grid connections, standby generators and existing solar backup systems will be retained strictly as emergency reserve behind the new systems, and must remain fully functional in that role.

1.4 This Request for Quotation (“RFQ”) invites quotations from suitably licensed and experienced contractors for the design, supply, installation, testing, commissioning and maintenance of the systems described in this document.

1.5 This RFQ comprises Sections 1 to 10 and Annexes A to D. Bidders must respond in the formats provided in the Annexes.

2. Objectives

The systems procured under this RFQ shall:

- (a) Meet one hundred per cent of each site's verified daily energy demand from solar generation under normal operating conditions;
- (b) Provide battery autonomy in accordance with Section 5, so that broadcasting continues through the night and through periods of poor sunshine without recourse to grid or generator;
- (c) Manage sources automatically and without interruption to broadcasting, in strict priority order: solar, battery, grid (where present), generator;
- (d) Preserve and integrate the Employer's existing backup assets (grid connections, generators and existing solar backup systems) without degradation of their function;
- (e) Deliver a uniform, remotely monitored fleet with strong operation and maintenance support appropriate to remote locations.

3. Scope of Works

3.1 Site audit and detailed design (after award). For every site: metered load measurement over at least **[7]** days at studio and combined sites and **[3]** days at transmission only sites (or a verified nameplate and operating hours assessment where metering is impracticable), a load profile analysis distinguishing day and night demand, structural assessment of roofs and grounds, measurement of available roof and ground space, shading analysis, earth resistance testing, condition assessment of existing generators, changeover equipment and existing solar backup systems, confirmation of single or three phase distribution, and a design report per site (including single line diagrams and equipment schedules) submitted for the Employer's written approval before any procurement of materials.

3.2 Supply and delivery. All photovoltaic modules, inverters, batteries, mounting structures, cabling, protection and balance of system equipment, delivered to each site with all transport, insurance in transit and handling included. Bidders are responsible for logistics to remote sites, and long distance road transport to northern counties.

3.3 Civil and structural works. Mounting structures (roof or ground as determined by the audit), foundations for ground mounted arrays, cable routes and trenching, construction or upgrading of ventilated and secure battery and inverter rooms or enclosures, security fencing and caging where specified, and making good of all surfaces.

3.4 Electrical works and integration. Complete DC and AC installation; integration such that the existing grid supply, existing back up solar and standby generators remain available as backup layers; generator auto start interface via volt free contacts; safe integration or, where the Employer approves in writing, certified isolation of existing solar backup systems; coordination of earthing with existing mast earth systems; surge protection; labelling and safety signage. The Contractor shall be liable for any damage to existing broadcast, electrical or backup equipment arising from the works.

3.5 Source priority and controls. Systems shall prioritize solar and battery at all times. Grid or generator shall carry the load only when battery state of charge falls below a configurable threshold **[indicatively 20 per cent]** or during approved maintenance, and the system shall revert automatically once solar and battery capacity is restored. Source transfers shall cause no interruption to broadcast operations.

3.6 Testing and commissioning. Inspection and testing in accordance with IEC 62446; a continuous 72 hour off grid acceptance test at each site, carrying the full operational load with grid and generator isolated; demonstration of automatic transfer and generator auto start; and issue of commissioning certificates and test records.

3.7 Training and documentation. Operational training for at least two Employer staff at each site and two engineers at the head office; as built drawings, test records, operation and maintenance manuals, and warranty certificates for every site.

3.8 Remote monitoring. A monitoring solution providing per site dashboards and a consolidated network view at the Nairobi head office, showing generation, consumption, battery state and active source, with configurable alerts, at least five years of data retention, and data export capability. Platform access fees for at least **[5]** years shall be included in the quotation.

3.9 Operation and maintenance. A 24 month operation and maintenance service included in the quotation, comprising at least two preventive maintenance visits per site per year, monthly remote health checks, corrective maintenance within the response times in Clause 5.11, a panel cleaning regime appropriate to local dust conditions, and a recommended and priced critical spares holding.

3.10 Environmental obligations. Removal of all packaging and waste from site, and a written undertaking to take back and responsibly recycle batteries at end of life in accordance with applicable Kenyan e-waste requirements.

4. Site Schedule, Energy Baseline and Load Data

4.1 The Employer's energy analysis of July 2026 established the following baseline across the fourteen operational sites: total consumption of approximately 864.5 kWh per day (25,935 kWh per month), at an estimated grid electricity cost of approximately KES 728,264 per month (KES 8.74 million per year), excluding generator fuel. The sites, their functions and current load estimates are set out below.

No	Site	County	Tier and function	Grid supply	Existing backup	Daily load
1	Kakuma (Atoo FM)	Turkana	Tier 1: studio, office and transmission	[Yes, unreliable]	TBC	95 kWh

No	Site	County	Tier and function	Grid supply	Existing backup	Daily load
2	Garissa (Hekima FM)	Garissa	Tier 1: studio, office and transmission	[Yes, unreliable]	[TBC]	95 kWh
3	Voi studio	Taita Taveta	Tier 2: studio and office	[Yes]	[TBC]	28.5 kWh
4	Marsabit studio	Marsabit	Tier 2: studio and office	[Yes, unreliable]	[TBC]	28.5 kWh
5	Lodwar studio (Maata FM)	Turkana	Tier 2: studio and office	[Yes, unreliable]	[TBC]	28.5 kWh
6	Lamu studio	Lamu	Tier 2: studio and office	[Yes, unreliable]	[TBC]	28.5 kWh
7	Vuria transmission	Taita Taveta	Tier 3: transmission	[TBC]	[TBC]	66.5 kWh
8	Lodwar transmission	Turkana	Tier 3: transmission	[TBC]	[TBC]	66.5 kWh
9	Marsabit transmission	Marsabit	Tier 3: transmission	[TBC]	[TBC]	66.5 kWh
10	Hindi (Lamu) transmission	Lamu	Tier 3: transmission	[TBC]	[TBC]	66.5 kWh
11	Wajir transmission	Wajir	Tier 3: transmission	[TBC]	[TBC]	66.5 kWh
12	Loyangalani transmission	Marsabit	Tier 3: transmission	[Limited or none, TBC]	[TBC]	66.5 kWh
13	Mandera transmission	Mandera	Tier 3: transmission (new mast site)	[TBC]	[TBC]	66.5 kWh
14	Head office, Nairobi	Nairobi	Tier 4: head office	Yes	[Generator kVA TBC]	95 kWh

4.2 The daily loads above are Employer estimates from the July 2026 analysis and shall be verified by the audits in Clause 3.1. Indicative load profiles: transmission loads run approximately continuously around the clock; studio and office loads are concentrated in daytime and evening hours **[approximately 05.00 to 22.00, to be confirmed]**. Transmitter power ratings **[TBC per site]** and broadcast hours **[TBC per site]** will be provided to shortlisted bidders and confirmed at audit. Systems shall be sized against verified loads in accordance with Section 5.

4.3 Environmental conditions include: extreme heat and dust at Mandera, Wajir, Garissa, Lodwar and Kakuma (design ambient **[48]** degrees Celsius); very high winds at Loyangalani and Marsabit; a marine, corrosive atmosphere at the Lamu and Hindi (Lamu) sites; high altitude and elevated lightning exposure at Vuria; and elevated lightning risk at all mast sites.

4.4 Bidders should make appropriate allowance for road and, where applicable, water transport logistics, and for security and travel arrangements applicable in north eastern counties. The Employer will assist with local coordination and introductions.

5. Minimum Technical Requirements

5.1 Design basis. Worst month design using not more than **[4.5]** peak sun hours per day and a performance ratio of not more than 0.80; array output, after temperature, soiling and system derating, of at least 120 per cent of the verified daily load; and at least 20 per cent headroom for future load growth.

5.2 Battery autonomy. Usable storage of at least 1.5 times the verified daily load at all sites, and at least 2.0 times at Loyangalani and Mandera.

5.3 Minimum configurations. The minima below are derived from the July 2026 load estimates by applying Clauses 5.1 and 5.2. Bidders shall quote on these minima; final sizing shall follow the verified

loads, and alternatives may be proposed with full engineering justification following the site audits. A uniform inverter and battery platform across the network is strongly preferred for spares and monitoring commonality. Multiple inverters in parallel, and three phase configurations where the site distribution requires, are permitted.

Tier	Sites	Solar array (min)	Usable storage (min)	Inverter capacity (min)
Tier 1: studio, office and transmission	Kakuma, Garissa	32 kWp	143 kWh	15 kW
Tier 2: studio and office	Voi, Marsabit, Lodwar, Lamu	10 kWp	43 kWh	8 kW
Tier 3: transmission	Vuria, Lodwar, Marsabit, Hindi (Lamu), Wajir, Loyangalani, Mandera	22 kWp	100 kWh (133 kWh at Loyangalani and Mandera)	10 kW
Tier 4: head office	Nairobi [subject to load audit]	32 kWp	143 kWh	15 kW

5.4 Photovoltaic modules. From a manufacturer on the current Bloomberg New Energy Finance Tier 1 list; monocrystalline, at least **[550]** Wp per module; certified to IEC 61215 and IEC 61730; product warranty of at least 12 years; linear performance warranty of at least 25 years with at least 85 per cent of rated output at year 25; salt mist corrosion certification (IEC 61701) for the Lamu and Hindi (Lamu) sites.

5.5 Inverters. Hybrid units accepting solar, battery, grid and generator inputs; certified to IEC 62109; product warranty of at least 5 years, with the cost of extension to 10 years quoted as an option; generator auto start via volt free contacts; parallel capable; with surge capability adequate for transmitter and air conditioning inrush, demonstrated in the design report; and with integrated or compatible monitoring.

5.6 Batteries. Lithium iron phosphate (LiFePO₄); certified to IEC 62619, with UN 38.3 transport certification; at least 6,000 cycles at 80 per cent depth of discharge at 25 degrees Celsius; warranty of at least 10 years or at least 70 per cent retained capacity at year 10; battery management system with over temperature protection; low voltage (48 V class) or high voltage battery systems are both acceptable; and an installation design demonstrating safe operation at site ambient conditions through shading, ventilation or active cooling.

5.7 Mounting and structures. Hot-dip galvanised steel or marine grade aluminium with stainless steel fasteners; wind load design appropriate to each site, with a minimum **[160]** km per hour gust rating at Loyangalani and Marsabit; engineered foundations for ground mounted arrays; array siting that respects mast guy wires, anchor points, fall zones and maintenance access; anti-theft module fasteners at all sites; and, where roof mounted, roof structural adequacy confirmed in the design report.

5.8 Protection, wiring and safety. Compliance with IEC 60364 and Kenyan wiring rules; DC isolation and string protection; Type 1 and Type 2 surge protection on both DC and AC sides; lightning protection and earthing coordinated with existing mast earth systems, achieving earth resistance of not more than **[5]** ohms or bonded in accordance with the approved design; clear labelling; and a suitable fire extinguisher and safety signage in every plant room.

5.9 Enclosures and environment. IP65 rated outdoor equipment or indoor installation; dust filtration and vermin proofing; secure, ventilated battery and inverter rooms or lockable cages; an intruder alarm shall be priced as an option for each site.

5.10 Metering and monitoring. In accordance with Clause 3.8, with metering of load, solar, battery, grid and generator contributions.

5.11 Operation and maintenance response. Remote diagnosis within **[24]** hours of a reported fault; attendance on site within **[5]** working days for northern and island sites and **[3]** working days for all other sites. Temporary reversion to backup sources is permitted during repairs.

5.12 Statutory compliance. The Contractor shall hold a valid Energy and Petroleum Regulatory Authority (EPRA) solar photovoltaic contractor licence of a class appropriate to these works, and shall deploy EPRA licensed solar photovoltaic technicians and licensed electrical workers for AC works. All equipment shall comply with applicable Kenya Bureau of Standards requirements and import conformity procedures. The Contractor shall obtain any county or other permits required for the works.

5.13 Grid export (optional). Where a grid connection exists, bidders may optionally price grid export capability compliant with the applicable regulatory framework. This is not a core requirement and will not affect technical scoring.

6. Programme

6.1 The indicative programme is: contract award **[September 2026]**; Phase 1 (Mandera, Wajir, Loyangalani, Marsabit studio, Marsabit transmission, Garissa) commissioned by **[28 February 2027]**; Phase 2 (Kakuma, Lodwar studio, Lodwar transmission, Lamu studio, Hindi (Lamu) transmission, Vuria, Voi studio) commissioned by **[30 June 2027]**; Phase 3 (head office, Nairobi) commissioned by **[30 September 2027]**.

6.2 The Employer may adjust phasing and sequencing to align with funding, station operations and weather. Bidders shall submit a programme showing mobilisation, per site durations and commissioning dates.

6.3 The works shall not interrupt broadcasting. Any necessary outage shall be agreed in advance with the relevant station manager and scheduled in approved overnight windows.

7. Content of Quotations

7.1 Technical proposal (File 1) shall contain:

- (a) Company profile, certificate of incorporation and current CR12;
- (b) Valid EPRA solar photovoltaic contractor licence, and the licences of the technicians proposed for these works;
- (c) Valid KRA tax compliance certificate;
- (d) Audited financial statements for the last two financial years;
- (e) Evidence of insurance: contractor's all risks, public liability of at least KES **[20,000,000]**, and WIBA cover;
- (f) At least three reference projects of at least **[20]** kWp each completed within the last five years, including at least one incorporating battery storage of at least **[50]** kWh and at least one off grid or hybrid installation in an ASAL or comparably remote environment, with contactable client references;
- (g) Manufacturer authorisation letters for the proposed modules, inverters and batteries;
- (h) Full datasheets, certificates and warranty terms for all major equipment;
- (i) A preliminary design for each tier, including array layout concept, storage sizing calculations against Clauses 5.1 and 5.2, and a description of the source priority scheme;
- (j) Methodology: site logistics, a security plan for remote counties, a quality plan, and a health and safety plan;

- (k) A description of the proposed remote monitoring solution;
- (l) An operation and maintenance plan with service level commitments and a spares proposal;
- (m) A training plan;
- (n) A programme in Gantt form;
- (o) Curricula vitae of key personnel;
- (p) A completed Technical Compliance Matrix (Annex B), with any deviations clearly declared;
- (q) A signed Bidder Declaration (Annex D).

7.2 Financial proposal (File 2) shall contain the completed Price Schedule (Annex C), itemised per site and per cost head (equipment supply; delivery and logistics; installation and civil works; security works; training; monitoring; and the 24 month operation and maintenance service shown separately); the VAT treatment of each line, stating the legal basis relied upon; unit rates for the optional items in Annex C; price validity of at least **[90]** days; and the bidder's proposed payment terms.

7.3 Quotations may be submitted for the whole network. The Employer may, at its discretion, award the whole, a phase, or particular sites, to one or more bidders.

8. Evaluation

8.1 Stage 1: mandatory requirements (pass or fail). Items 7.1 (a) to (h) and (q) must be complete and valid, and the quotation must be submitted by the deadline in the required format.

8.2 Stage 2: technical evaluation, out of 70 marks with a qualifying threshold of 49 marks:

Criterion	Marks
Technical design quality and compliance with Section 5	25
Equipment quality, certifications and warranties	15
Relevant experience and references, including ASAL or off grid work	15
Operation and maintenance plan, response commitments and local support footprint	10
Programme and methodology, including remote site logistics	5
Total technical	70

8.3 Stage 3: financial evaluation, out of 30 marks. The lowest evaluated compliant price receives 30 marks; other compliant bids receive marks pro rata (lowest price divided by the bid price, multiplied by 30).

8.4 Award will be to the highest combined score, subject to the Employer's rights in Clause 9.10.

9. Terms and Conditions

9.1 Contract. The successful bidder will enter into a written contract incorporating this RFQ, the accepted quotation and such further terms as the parties agree.

9.2 Payment terms (indicative, subject to negotiation). Not more than **[30]** per cent advance, payable only against an unconditional bank guarantee of equal value; **[50]** per cent on delivery of materials to site, verified by the Employer; **[10]** per cent on successful commissioning and acceptance of each site; and **[10]** per cent retention released after the defects liability period.

9.3 Performance security. **[10]** per cent of the contract value, by bank guarantee, valid until the end of the defects liability period.

9.4 Defects liability. Twelve months from acceptance of each site, running concurrently with the operation and maintenance service. Manufacturer warranties continue thereafter in accordance with Section 5.

9.5 Liquidated damages. **[0.5]** per cent of the value of the delayed works for each week of delay, capped at **[10]** per cent.

9.6 Risk and title. The Contractor bears risk in the works until acceptance of each site and shall insure accordingly.

9.7 Compliance with law. The Contractor shall comply with all applicable laws, including the Occupational Safety and Health Act, 2007 and the Bribery Act, 2016. Any attempt to improperly influence this process will lead to disqualification.

9.8 Conflicts of interest. Bidders shall disclose in Annex D any relationship with the Employer's staff, directors or affiliates.

9.9 Confidentiality. This RFQ and all site information are confidential and shall be used only for the purpose of preparing a quotation.

9.10 Employer's rights. The Employer is not bound to accept the lowest or any quotation; may seek clarifications from any bidder; may negotiate with any bidder; may award the whole or any part of the works, including splitting the award between bidders; and may cancel or vary this process at any time without liability. All costs of bidding are for the bidder's account.

9.11 Governing law. The laws of Kenya.

10. Clarifications and Submission

10.1 Clarification questions shall be submitted in writing to **[procurement@twr.co.ke]** by **[Monday, 21 September 2026]**. Answers will be circulated to all invited bidders without identifying the questioner.

10.2 An optional pre-bid briefing will be held by teleconference on **[date and time; joining details on request]**.

10.3 Submission. Two separate PDF files, clearly marked "Technical Proposal" and "Financial Proposal", shall be sent by email to **[procurement@twr.co.ke]** with the subject line "**[SIFA/RFQ/SOLAR/2026/01]**, Bidder Name", or delivered in two sealed envelopes to **[physical address]**, in each case by **[Wednesday , 30 September 2026, 5.00 pm East Africa Time]**. Late submissions will not be considered.

Issued for and on behalf of SIFA FM Stations Limited

Dr. Evalyne Njoki Chege

Executive Director, Trans World Radio Kenya / SIFA FM Stations Ltd

Annex A: Additional Site Data

The following additional data will be issued to shortlisted bidders and confirmed during the site audits under Clause 3.1:

- (a) GPS coordinates of each site: **[to be issued]**;
- (b) Transmitter make, model and power rating per site: **[to be issued]**;
- (c) Broadcast hours per station: **[to be issued]**;
- (d) Generator make, model and capacity (kVA) per site: **[to be issued]**;
- (e) Existing solar backup system details per site: **[to be issued]**;
- (f) Available roof and ground space per site, and single or three phase supply details: **[to be issued]**;
- (g) Recent electricity invoices and generator fuel records, where available: **[to be issued]**;
- (h) Site photographs and access notes: **[to be issued]**.

Annex B: Technical Compliance Matrix

Bidders shall complete every row. Any deviation must be clearly described; blank rows will be treated as non-compliance.

Clause	Requirement (summary)	Comply (Yes or No)	Details or deviation
3.1	Post-award metered site audits, load profiling and design reports for Employer approval		
3.4	Integration preserving existing grid, generator and solar backup layers		
3.5	Automatic source priority: solar, battery, grid, generator; no broadcast interruption		
3.6	IEC 62446 testing and 72 hour off grid acceptance test per site		
3.7	Training and full documentation per site		
3.8	Remote monitoring with network dashboard and [5] year platform access		
3.9	24 month operation and maintenance service included		
3.10	Waste removal and battery end of life take back undertaking		
5.1	Design basis: [4.5] peak sun hours, performance ratio not more than 0.80, 120 per cent of verified load, 20 per cent growth headroom		
5.2	Autonomy: 1.5 days at all sites; 2.0 days at Loyangalani and Manderu		
5.3	Minimum configurations per tier; parallel and three phase permitted		
5.4	Tier 1 modules, IEC 61215 and 61730, warranties, IEC 61701 at Lamu and Hindi		
5.5	Hybrid inverters, IEC 62109, 5 year warranty, generator auto start, surge capability		
5.6	LiFePO4 batteries, IEC 62619, UN 38.3, 6,000 cycles, 10 year warranty, thermal design		
5.7	Mounting: galvanised or marine grade, wind rating, foundations, mast clearances, anti-theft fasteners		
5.8	Protection, earthing and lightning coordination with mast earth systems		
5.9	Enclosures, dust and vermin protection, security caging; alarm priced as option		
5.11	Response times: remote [24] hours; on site [5] or [3] working days		
5.12	EPRA contractor and technician licences; KEBS compliance; permits		
6.1 to 6.3	Programme commitments and no interruption to broadcasting		

Annex C: Price Schedule

Table C1: Price per system tier (KES)

Item	Tier 1	Tier 2	Tier 3	Tier 4
Photovoltaic modules				
Hybrid inverters				
Batteries				
Mounting structures, foundations and balance of system				
Protection, earthing and monitoring hardware				
Installation, civil and electrical works				
Site security works				
Delivery and logistics (average per site)				
Subtotal per system				

Table C2: Site and network summary (KES)

Description	Tier	Amount
1. Kakuma (Atooi FM)	Tier 1	
2. Garissa (Hekima FM)	Tier 1	
3. Voi studio	Tier 2	
4. Marsabit studio	Tier 2	
5. Lodwar studio (Maata FM)	Tier 2	
6. Lamu studio	Tier 2	
7. Vuria transmission	Tier 3	
8. Lodwar transmission	Tier 3	
9. Marsabit transmission	Tier 3	
10. Hindi (Lamu) transmission	Tier 3	
11. Wajir transmission	Tier 3	
12. Loyangalani transmission (2.0 days autonomy)	Tier 3	
13. Mandera transmission (2.0 days autonomy)	Tier 3	
14. Head office, Nairobi	Tier 4	
Remote monitoring platform ([5] years)	Network	
Training (all sites and head office)	Network	

Description	Tier	Amount
Operation and maintenance, 24 months, all sites	Network	
Recommended critical spares holding	Network	
Subtotal		
VAT (as applicable, basis to be stated)		
Grand total		

Table C3: Optional items (KES)

Optional item	Unit	Rate
Additional battery module, supplied and installed	Per module (state kWh)	
Additional photovoltaic module, supplied and installed	Per module (state Wp)	
Intruder alarm system	Per site	
Inverter warranty extension to 10 years	Per inverter	

Annex D: Bidder Declaration

We, **[name of bidder]**, of **[address]**, hereby declare that:

- (a) The information provided in our quotation is true, accurate and complete in all material respects;
- (b) We have no relationship with any member of the Employer's staff, board or affiliates that could give rise to a conflict of interest, except as disclosed here: **[state any disclosure, or write None]**;
- (c) We have not engaged, and will not engage, in any form of bribery, fraud, collusion or coercion in connection with this process, and we shall comply with the Bribery Act, 2016;
- (d) We accept the terms and conditions of this RFQ, including the Employer's rights in Clause 9.10;
- (e) Our quotation remains valid for at least **[90]** days from the submission deadline.

Name: _____

Position: _____

Signature: _____

Date: _____

Company stamp: