BRITAM TOWER

LIFT BACKUP POWER SOLUTION

TENDER INSTRUCTIONS, SCOPE OF WORKS AND PRICING NOTES

Britam Tower, Upper Hill, Nairobi | Currency: Kenya Shillings (KES)

1. Purpose and tender basis

This document shall be read together with the accompanying Excel Bill of Quantities (BOQ). The BOQ is intended to normalise the scope for open competitive tendering.

The solution is intended principally to maintain lift power continuity during utility-to-generator changeover and short power interruptions.

2. Design basis and phasing

Phase	Scope	Provisional capacity	Tender treatment
Phase 1	Four High-Rise passenger lifts	4 × 50 kW / 100 kWh = 200 kW / 400 kWh	Base tender; price separately
Phase 2	Four Mid-Rise passenger lifts	3 × 50 kW / 100 kWh = 150 kW / 300 kWh	Separately priced option
Phase 3	PV integration and EMS optimisation	Capacity/interfaces to be confirmed	Separately priced

The recorded connected load is 189.9 kW for High-Rise, 114.4 kW for Mid-Rise and 304.3 kW overall. The seven-unit, 350 kW / 700 kWh configuration above is a phase-based tendering basis derived from the memorandum; it is not a substitute for the mandatory load/transient study or final design approval. The tenderer shall state whether the proposed ratings can support the actual lift duty.

3. Instructions to tenderers

1. Attend a site visit before pricing. Verify equipment locations, cable routes, existing switchboards, generator and ATS interfaces, access/cranage, working hours, shutdown constraints, fire compartments, drainage and installation clearances.
2. Complete all yellow/input cells in the Excel BOQ. Enter all prices in KES. Unless otherwise stated in the tender return, rates shall be exclusive of VAT; show VAT separately and identify all other taxes, duties and levies.

3. Rates shall be deemed to include labour, supervision, tools, plant, transport, delivery, offloading, storage, lifting, consumables, fixing accessories, testing, documentation, waste removal, making good, overheads and profit.
4. Do not leave an item blank. Enter zero and explain if an item is not applicable or included elsewhere. Any item omitted from the tender but necessary for a complete, safe, functional installation shall be clearly identified before tender close.
5. Quantities shown for cable and certain equipment are provisional. Tenderers shall verify quantities and include a separate schedule of any adjustments, with measured lengths, route drawings and technical justification. Do not silently alter the issued BOQ quantities.
6. Submit a fully coordinated technical proposal, equipment datasheets, OEM authorisation, single-line diagrams, load calculations, protection studies, layout drawings, programme, method statement, risk assessment, HSE plan, warranty schedule and list of exclusions/deviations.
7. Identify the exact OEM/model offered. SAJ CHS2 is the reference architecture; technically equivalent alternatives may be offered only with a full compliance matrix and evidence of equivalent or better performance. No substitution shall be assumed accepted.
8. Price Phase 1, Phase 2 and Phase 3 independently. Phase 2 and Phase 3 are options and shall not be included in the Phase 1 base tender total unless the tender form expressly directs otherwise.
9. Quote all lifecycle costs separately, including annual maintenance, EMS/cloud licences and subscriptions, remote monitoring, battery replacement assumptions, critical spares, software updates and any call-out charges for at least five years.
10. State tender validity, delivery lead time, implementation duration, commissioning duration, planned outages, proposed payment milestones and any advance-payment security requirements.
11. Do not rely on supplier quotation currency labels or totals as the tender budget. Tenderers shall provide a complete, reconciled KES price with clear VAT treatment and an itemised scope.

4. Minimum technical and performance requirements

- Complete a lift-specific load/transient study, including starting current, simultaneous operation assumptions, regenerative behaviour, power factor, harmonic considerations and required overload capability.
- Confirm continuous AC output rating and short-duration overload capability for the proposed system. The final capacity must be validated against the actual lift load and shall explicitly address the report's recommendation to evaluate 350 kW for the combined installation.
- State nominal and usable battery energy, permitted depth of discharge, round-trip efficiency, battery operating temperature range, expected cycle life, degradation assumptions, guaranteed end-of-warranty capacity and autonomy under an agreed duty cycle. Do not represent nominal kWh as guaranteed usable autonomy.

- Provide a dedicated and appropriately rated lift power distribution arrangement, including combiner board, breakers/MCCBs, isolation, maintenance bypass, metering, CTs, interlocks and protective coordination with existing grid, generator, ATS and lift distribution boards.
- Provide cable sizing calculations and confirm cable type, route, voltage drop, short-circuit withstand, containment, gland/termination requirements, earthing/bonding and surge/lightning protection.
- Define the complete control philosophy for grid, generator, BESS, lift PDB and any PV interface. State actual transfer time, expected response during changeover, failure modes, safe shutdown, local override and loss-of-communications behaviour.
- Provide a manufacturer-compliant installation with safe access and clearances, weather protection, stable foundation, ventilation/heat rejection, drainage/water-ingress protection, secure access, battery fire detection/mitigation, emergency isolation and response signage.
- Where cloud/web/app monitoring is proposed, specify data ownership, user access controls, cybersecurity measures, local operation in the event of internet loss, alarm escalation, licence fees and data export arrangements.

5. Testing, commissioning and acceptance

12. Submit design documents and obtain Britam's written approval before procurement, fabrication or installation.
13. Provide factory documentation and inspection/test records for the BESS, inverter, battery, BMS, switchgear and protective devices.
14. Complete pre-commissioning tests including visual inspection, insulation resistance, continuity, polarity, earthing, protection settings, interlocks, communications, metering and alarm verification.
15. Conduct witnessed simulated mains-failure and grid-to-generator transfer tests with Britam and the KONE/lift maintenance contractor present. Test under an agreed lift operating condition and record interruptions, transfer response, alarms, battery response and any lift faults.
16. Demonstrate the agreed transfer performance and the absence of unacceptable lift interruption during the specified transfer scenario. The exact acceptance thresholds and test scenarios shall be agreed and documented before commissioning.
17. Provide signed test sheets, final settings register, as-built drawings, updated SLD, cable schedules, O&M manuals, warranties, training attendance and asset data before practical completion.
18. Final acceptance and release of retention/payment shall be subject to successful testing, closure of defects and receipt of the required handover documentation.

6. Warranty, maintenance and commercial requirements

- Provide separate warranty periods and terms for battery cells/modules, inverter, BMS, EMS, switchgear and installation workmanship. Identify exclusions and the process for warranty claims.

- State battery replacement assumptions and indicative replacement cost, including expected life, cycle/throughput conditions, degradation and any capacity augmentation required over the proposed design life.
- Price first-year preventive maintenance and separately state annual maintenance costs after the defects period, response times, emergency call-out rates, remote support, software/firmware updates and spares availability.
- Payment milestones shall be proposed by the tenderer and linked to approved design, verified delivery, installation progress, successful commissioning and acceptance. Any advance payment must be separately identified and supported by appropriate security where required by Britam.
- All variations must be authorised in writing by Britam before the varied work is undertaken. Tenderers shall not rely on verbal instructions

7. Tender submission checklist

☐ Completed Excel BOQ and Tender Price Summary in KES.

☐ Separate Phase 1 base price, Phase 2 option and Phase 3 option.

☐ Technical compliance schedule completed, with deviations clearly listed.

☐ OEM datasheets, authorisation, warranties and lifecycle information.

☐ Load/transient study approach and final design deliverables.

☐ Coordinated SLD, protection philosophy, cabling and layout proposal.

☐ Programme, delivery lead time, shutdown plan and HSE/method statements.

☐ Testing and acceptance plan, including witnessed transfer tests.

☐ Maintenance, support, EMS/cloud and five-year lifecycle cost schedule.

☐ All exclusions, assumptions, provisional quantities and payment terms.

Tender qualification: This BOQ is issued for tender pricing and scope normalisation. It does not constitute final design approval, a guaranteed capacity, a budget approval or an instruction to commence works. The successful tenderer shall proceed only on written instruction and approved design.