PROMASS ENGINEERING SERVICES LIMITED

ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY STANDARDS

For the Proposed Interconnected Mini-grid Project under the Distributed Access through Renewable Energy Scale-up (DARES) Programme

Submission purpose: Project-level minimum ESHS standards for submission to the Rural Electrification Agency (REA) and mandatory application throughout development, construction, interconnection, operation, maintenance and decommissioning.

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Prepared by	Promass Engineering Services Limited
Approved by	Dr Sani Mohammed Bida, MD/CEO

DOCUMENT APPROVAL AND REVISION CONTROL

Promass Engineering Services Limited approves these Environmental, Social, Health and Safety Standards as the minimum mandatory performance requirements for the proposed DARES Interconnected Mini-grid Project. The standards apply to the company, its employees, contractors, subcontractors, suppliers, consultants, security providers and any other party acting for the project.

Environmental and Social Manager	Project Director	Dr Sani Mohammed Bida, MD/CEO
Prepared / coordinated by	Reviewed by	Approved by

Revision history

Version	Date	Description of change	Approved by
0.1	04 September 2025	Original three-page corporate ESHS Policy and Guidelines for solar mini-grid activities in Nigeria.	Chairman/ CEO
1.0	29 July 2026	Comprehensively amended as a developer-level ESHS Standards document for the DARES Interconnected Mini-grid Project. Added minimum performance criteria, interconnected-grid controls, battery and e-waste requirements, contractor obligations, monitoring tools and project-specific annexes.	MD/CEO

Before final submission or mobilisation: Complete Annex A with the project location, installed capacity, host communities, DisCo, point of common coupling, land status, permits, named ESHS focal persons, grievance contacts, emergency contacts and approved implementation budget. Site-specific ESIA/ESMP, LMP, SEP, RAP/LRP, ERP and technical procedures shall be prepared where screening or REA/DisCo requirements make them necessary.

EXECUTIVE SUMMARY

These Environmental, Social, Health and Safety Standards (the Standards) amend and expand the Promass Engineering Services Limited ESHS Policy and Guidelines approved on 04 September 2025. The original document established commitments on environmental management, social management, occupational health and safety, implementation, monitoring, legal compliance, communication and management commitment. This version retains those commitments and converts them into auditable minimum requirements for the proposed Interconnected Mini-grid Project under the DARES Programme.

The Standards complement the project Environmental and Social Management System (ESMS) and Code of Conduct. The ESMS describes the governance and procedures used to identify and manage risks; these Standards define the minimum performance expected from all project parties. They do not replace site-specific legal approvals, environmental and social instruments, construction method statements, interconnection agreements, manufacturer instructions or DisCo switching procedures.

An interconnected mini-grid presents additional risks beyond a standalone mini-grid because electricity may be supplied from both the mini-grid and the Distribution Company network. Existing lines, transformers, customer installations and public rights-of-way may be rehabilitated or energised. Safe isolation, protection coordination, anti-islanding, switching authority, customer communication, controlled energisation, public electrical safety and joint emergency arrangements with the DisCo are therefore central requirements.

Non-negotiable commitments

- No project activity shall proceed without required screening, land documentation, permits, design approval, budgeted mitigation and accountable persons.
- The mitigation hierarchy shall be applied: avoid; minimise; restore or rectify; and compensate or offset residual impacts only where permitted and approved.
- No forced labour, harmful child labour, discrimination, harassment, Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH), Gender-Based Violence (GBV), Violence Against Children (VAC), retaliation or abuse of power is permitted.
- No electrical work, switching, testing or energisation shall be performed by unauthorised persons or without an approved safe system of work.
- Serious incidents shall be reported immediately to project management and within the timeframe required by REA/DARES, the DisCo, regulators and contracts.
- Every contractor shall implement a Contractor ESHS Plan/C-ESMP, provide competent supervision, train workers, maintain records and correct non-compliance as a condition of payment and continued engagement.

> **Standard terminology: Shall** and **must** indicate mandatory requirements. **Should** indicates recommended good practice. **May** indicates a permitted option. Where two requirements differ, the more protective requirement applies unless REA or the competent authority directs otherwise in writing.

ABBREVIATIONS AND ACRONYMS

Acronym	Meaning	Acronym	Meaning
AP/PAP	Affected Person / Project-Affected Person	BESS	Battery Energy Storage System
C-ESMP	Contractor Environmental and Social Management Plan	CLO	Community Liaison Officer
CoC	Code of Conduct	DARES	Distributed Access through Renewable Energy Scale-up
DisCo	Electricity Distribution Company	E&S	Environmental and Social
EIA	Environmental Impact Assessment	ERP	Emergency Response Plan
ESHS	Environmental, Social, Health and Safety	ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan	ESMS	Environmental and Social Management System
ESS	World Bank Environmental and Social Standard	FMEnv	Federal Ministry of Environment
GBV	Gender-Based Violence	GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism	HSE	Health, Safety and Environment
ILO	International Labour Organization	IMG	Interconnected Mini-grid
JSA	Job Safety Analysis	LMP	Labour Management Procedure
LOTO	Lock-out/Tag-out	LRP	Livelihood Restoration Plan
NERC	Nigerian Electricity Regulatory Commission	NESREA	National Environmental Standards and Regulations Enforcement Agency
O&M	Operation and Maintenance	OHS	Occupational Health and Safety
PCC	Point of Common Coupling	PPE	Personal Protective Equipment
PTW	Permit to Work	PV	Photovoltaic
RAP	Resettlement Action Plan	REA	Rural Electrification Agency
SEA	Sexual Exploitation and Abuse	SEP	Stakeholder Engagement Plan
SH	Sexual Harassment	VAC	Violence Against Children
VLD	Voluntary Land Donation	WMP	Waste Management Plan

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1. PURPOSE, SCOPE AND RELATIONSHIP TO PROJECT INSTRUMENTS

1.1 Purpose

The purpose of these Standards is to define the minimum ESHS performance requirements that shall be planned, budgeted, implemented, monitored and evidenced throughout the DARES Interconnected Mini-grid Project. The Standards translate the company policy into practical rules for project design, procurement, construction, interconnection, operation, maintenance and decommissioning.

1.2 Objectives

- Prevent injury, ill health, pollution, social harm, livelihood loss, community conflict and damage to cultural heritage or biodiversity.
- Protect workers, customers, host communities, women, children, persons with disabilities and other vulnerable or disadvantaged groups.
- Ensure compliance with Nigerian law, REA/DARES requirements, NERC and DisCo requirements, applicable World Bank Environmental and Social Standards and contractual obligations.
- Establish measurable minimum requirements for contractors and suppliers and enable consistent inspection, reporting, audit and corrective action.
- Ensure the interconnected mini-grid is designed, commissioned and operated safely in coordination with the DisCo and affected customers.

1.3 Scope and lifecycle

These Standards apply to all Promass employees and to all persons or organisations acting on behalf of the project. They apply at the generation and battery site, along distribution lines and rights-of-way, at the PCC, at substations, transformers and customer premises where project work occurs, at stores and temporary work areas, during transport and at any worker accommodation or security post provided for the project.

Lifecycle phase	Application of the Standards
Project development	Site screening, alternatives, land and livelihood due diligence, stakeholder engagement, E&S studies, design risk review, permitting and budget.
Procurement and mobilisation	ESHS specifications, contractor prequalification, C-ESMP, competencies, insurance, equipment certification, worker induction and community notification.
Construction and network rehabilitation	Civil, electrical, transport, waste, community, labour, security, grievance and emergency controls; daily supervision and corrective action.
Testing and interconnection	DisCo coordination, approved switching programme, protection settings, LOTO, anti-islanding, earth tests, customer notices, controlled energisation and handover.
Operation and maintenance	Safe access, planned outages, vegetation management, battery management, public electrical safety, service communication, monitoring and incident response.
Decommissioning or transfer	Asset and waste inventory, disconnection, contaminated-site assessment, recycling/disposal, land restoration, worker and community transition and records handover.

1.4 Relationship to other project instruments

Instrument	Relationship to these Standards
Environmental and Social Management System (ESMS)	Provides governance, screening, procedures, responsibilities, monitoring and management review. These Standards define the minimum performance to be achieved.
Project ESIA/ESMP and C-ESMP	Translate assessed impacts into site-specific mitigation, monitoring, budget, programme and accountabilities. They may impose more stringent requirements.
Code of Conduct	Defines mandatory behaviour and prohibitions for workers, managers, contractors and security personnel.
Labour Management Procedure and worker GRM	Define labour terms, recruitment, worker welfare, OHS participation and confidential grievance handling.
Stakeholder Engagement Plan and community GRM	Define disclosure, consultation, participation, grievance channels and feedback.

Instrument	Relationship to these Standards
Interconnection agreement and DisCo procedures	Define asset boundaries, ownership, switching authority, protection, metering, outages, emergency response, handover and operating responsibilities.
Technical drawings, method statements, PTW and manufacturer manuals	Provide task-specific controls and shall be consistent with these Standards.

No substitution: Approval of this Standards document does not authorise construction or energisation. Work shall start only after applicable permits, land documents, site-specific instruments, technical approvals and contractual requirements are in place.

2. ESHS POLICY, PRINCIPLES AND OBJECTIVES

2.1 Policy statement

Promass Engineering Services Limited will integrate ESHS considerations into every business and project decision. The company will prevent pollution, protect the health and safety of workers and the public, engage communities respectfully, comply with applicable requirements and improve performance through monitoring, auditing, learning and management review.

2.2 Guiding principles

Principle	Mandatory application
Mitigation hierarchy	Avoid impacts where practicable; minimise unavoidable impacts; restore or rectify affected conditions; compensate or offset residual impacts only where lawful and approved.
Precaution and prevention	Uncertainty shall not be used to delay reasonable measures where serious or irreversible harm may occur.
Polluter pays	The party causing pollution or damage shall bear the cost of containment, clean-up, restoration and lawful disposal.
Do no harm and human rights	Activities shall respect dignity, equality, privacy, freedom from violence and access to remedy.
Meaningful participation	Affected people shall receive timely, understandable information and genuine opportunity to influence decisions that affect them.
Worker participation and stop-work	Workers may report hazards and stop unsafe work in good faith without retaliation.
Life-cycle and climate resilience	Design and management shall consider construction, operation, maintenance, extreme weather, emergency and decommissioning conditions.
Transparency and accountability	Decisions, inspections, incidents, grievances, corrective actions and performance shall be documented and reported to authorised stakeholders.

2.3 Corporate commitments retained from the original ESHS document

- Prevent pollution and minimise the environmental footprint of project activities.
- Protect worker and public health and safety through risk assessment, safe systems of work, competent supervision, PPE and emergency preparedness.
- Maintain open and respectful community communication and a transparent grievance mechanism.
- Protect biodiversity, water, air quality, soil, cultural heritage and climate resilience.
- Promote fair land processes, local employment, gender equality and inclusion of vulnerable groups.
- Maintain accurate records, monitor performance, conduct audits, report to relevant stakeholders and pursue continuous improvement.

3. APPLICABLE REQUIREMENTS AND COMPLIANCE HIERARCHY

3.1 Compliance hierarchy

The project shall comply with applicable federal, state and local laws; permit and approval conditions; REA/DARES instruments and written directions; NERC and DisCo requirements; the World Bank Environmental and Social Framework and financing instruments applicable to the project; contractual requirements; and recognised Good International Industry Practice where national requirements are silent. The Project Legal/Compliance Lead shall maintain a current legal and permit register.

3.2 Indicative Nigerian framework

Instrument / authority	Project relevance
Constitution of the Federal Republic of Nigeria 1999, as amended	Dignity, non-discrimination, property rights and access to remedies.
Electricity Act 2023 and applicable NERC regulations, codes and orders	Mini-grid approvals, safety, consumer protection, metering, tariffs, distribution and interconnection responsibilities.
REA/DARES environmental and social instruments and exclusion criteria	Eligibility, screening, risk management, reporting, grievance and incident requirements.
Environmental Impact Assessment Act, Cap E12 LFN 2004	Environmental assessment, approval, disclosure and monitoring where applicable.
NESREA Act 2007 and applicable environmental regulations	Pollution control, air, noise, sanitation, hazardous chemicals, waste and enforcement.
Land Use Act 1978 and applicable State land laws	Land rights, acquisition, occupancy, compensation and documentation.
Labour Act; Factories Act; Employees Compensation Act	Employment conditions, OHS, workplace welfare and compensation for occupational injury.
Child Rights Act and applicable State laws	Protection of persons under 18 and prohibition of exploitation and hazardous child labour.
Violence Against Persons (Prohibition) Act and applicable State laws	Prevention and response to violence, including sexual violence and harmful practices.
Road traffic, fire, public health, building and development-control requirements	Safe transport, emergency response, sanitation, structures, rights-of-way and local approvals.

3.3 International standards and good practice

Reference	Application
World Bank Environmental and Social Standards ESS1-ESS10	Risk assessment and management; labour; pollution prevention; community safety; land and resettlement; biodiversity; vulnerable groups; cultural heritage; stakeholder engagement.
World Bank Group General EHS Guidelines and applicable power-sector guidance	Good-practice limits and controls for emissions, waste, OHS, community safety, construction and operation.
ILO fundamental principles and relevant conventions	Freedom from forced labour, harmful child labour, discrimination and unsafe working conditions.
ISO 14001 and ISO 45001 principles	Environmental and occupational health and safety management-system good practice; reference does not imply certification.
Applicable IEC and electrical standards, manufacturer instructions and DisCo specifications	Design, equipment, protection, installation, testing, earthing, operation and maintenance.

Verification before use: The titles, current editions and applicability of laws, regulations, codes and permits shall be verified before mobilisation and whenever the project design, location or regulatory environment changes. This document is not legal advice.

4. GOVERNANCE, ROLES, RESOURCES AND STOP-WORK AUTHORITY

4.1 Accountability structure

Role	Minimum responsibilities
MD/CEO	Approve policy and resources; ensure ESHS is integrated into corporate decisions; review serious incidents and management-review outcomes.
Project Director	Overall project accountability; ensure permits, budgets, programmes, contractors and DisCo interfaces include ESHS requirements.
Environmental and Social Manager	Maintain the ESMS and Standards; lead screening, instruments, monitoring, stakeholder/GRM oversight, reporting and corrective-action tracking.
HSE Manager / Site HSE Officer	Lead hazard assessment, PTW, inspections, training, incident response, emergency drills, welfare and OHS records.
Engineering / Interconnection Lead	Ensure design safety, protection coordination, asset demarcation, switching programmes, test records, commissioning and safe handover.
Community Liaison Officer	Manage disclosure, consultation, community notices, grievance intake, vulnerable-group engagement and local employment communication.
HR / Labour Officer	Written terms, recruitment, age verification, worker GRM, welfare, non-discrimination, CoC administration and disciplinary process.
Contractor Project Manager	Provide competent ESHS staff, implement C-ESMP and method statements, train workers, maintain records and correct non-compliance.
Supervisors and workers	Follow approved controls, use PPE, report hazards/incidents, protect communities and stop work when conditions are unsafe.

4.2 Resources

The approved project budget shall include environmental and social assessments, permits, compensation or livelihood measures where applicable, ESHS staffing, training, PPE, monitoring, waste management, battery take-back, grievance management, emergency equipment, audits and corrective actions. Lack of budget or schedule pressure shall not justify non-compliance.

4.3 Stop-work authority

MGT-01 **Stop-work and escalation**

- Every worker, supervisor and authorised stakeholder may stop or refuse work where there is an immediate danger to life, serious environmental harm, unauthorised land entry, uncontrolled community conflict, unapproved energisation or another material breach.
- Work shall remain stopped until the hazard is assessed, controls are implemented and an authorised competent person formally releases the work.
- No person shall suffer retaliation or loss of lawful pay for a good-faith stop-work action or hazard report.

Minimum evidence: Stop-work record, investigation or JSA revision, corrective-action closure and supervisor release.

4.4 ESHS committees and coordination

- A project ESHS coordination meeting shall be held at least monthly during active construction and at a frequency proportionate to risk during operation.
- Daily pre-start briefings and task-specific toolbox talks shall be conducted for high-risk activities.
- Joint coordination with the DisCo shall occur before any work on shared or connected assets, planned outage, test, switching, energisation or emergency drill.
- Community and worker grievance committees shall be distinct, accessible and free from conflict of interest; SEA/SH matters shall use confidential survivor-centred channels and shall not be handled as ordinary public grievances.

5. ESHS PLANNING, RISK ASSESSMENT AND CHANGE MANAGEMENT

5.1 Screening and categorisation

MGT-02 **Screening before commitment**

- Every proposed site, distribution route, associated facility, land arrangement and material design change shall be screened against REA/DARES exclusion criteria and the project ESMS before commitment or mobilisation.
- Screening shall identify sensitive habitats, flood risk, cultural heritage, land and livelihood impacts, vulnerable groups, labour influx, security, community safety, waste, battery, electrical and cumulative risks.
- The required instruments, permits, consultations, specialists and budget shall be determined from the screening outcome.

Minimum evidence: Signed screening checklist, site photographs/map, risk classification, instrument decision and management approval.

5.2 Design-stage risk management

MGT-03 **Safe and sustainable design**

- Design reviews shall apply the mitigation hierarchy and eliminate hazards where practicable before relying on procedures or PPE.
- Layout shall provide safe access, drainage, fire separation, emergency egress, equipment clearances, security, accessibility and maintainability.
- Distribution design shall minimise rights-of-way impacts, unsafe crossings, vegetation conflict, road hazards and exposure of the public to electrical equipment.
- Climate and natural-hazard considerations shall include flooding, erosion, wind, lightning, heat, fire and extreme rainfall appropriate to the location.

Minimum evidence: Design ESHS review checklist, drawings, hazard log, action close-out and engineer approval.

5.3 Task risk assessment and method statements

MGT-04 **JSA and method statement**

- A task-specific JSA or equivalent risk assessment shall be completed before work begins and whenever conditions, personnel, equipment or design change materially.
- High-risk tasks shall have an approved method statement, competent supervision, PTW where required, emergency arrangements and pre-task briefing.
- Controls shall follow the hierarchy: elimination, substitution, engineering controls, administrative controls and PPE.

Minimum evidence: Approved JSA/method statement, briefing attendance, permits, inspection records and revisions.

5.4 Management of change

MGT-05 **Change control**

- Changes to site, route, equipment, battery chemistry, capacity, contractor, work method, protection settings, interconnection arrangement, land access or schedule shall be reviewed for ESHS implications before implementation.
- Affected permits, ESMP measures, stakeholder information, budgets, drawings and emergency plans shall be updated.
- Temporary changes shall be time-limited, approved and removed or formalised after review.

Minimum evidence: Change request, risk review, approvals, updated documents and communication record.

6. ENVIRONMENTAL STANDARDS

The environmental commitments in the original ESHS document are retained and expanded below. Site-specific ESMP requirements and permit conditions may be more stringent and shall prevail.

ENV-01 Site selection, biodiversity and vegetation

- Legally protected areas, internationally recognised biodiversity areas and critical habitats shall be excluded where required by REA/DARES criteria.
- The project shall avoid or minimise clearance, fragmentation, disturbance of nesting/breeding areas and introduction of invasive species.
- Clearance boundaries shall be surveyed and marked before work; no clearing shall occur outside approved limits.
- Native or suitable non-invasive species shall be used for restoration and landscaping; survival shall be monitored and failed planting replaced.
- Hunting, trapping, collection or harm to wildlife by project personnel is prohibited.

Minimum evidence: Screening/assessment, approved clearing plan, photographs, vegetation register and restoration monitoring.

ENV-02 Land, soil, erosion and drainage

- Topsoil shall be stripped, stored separately and reused for restoration where practicable.
- Earthworks shall be sequenced to minimise exposed soil; slopes, drains, sediment barriers and erosion controls shall be installed before heavy rainfall where practicable.
- Spoil shall be reused lawfully or taken to an approved location; it shall not block drains, watercourses, roads or community access.
- Fuel, oil, chemicals and waste shall not be placed directly on soil; contaminated soil shall be contained, assessed and lawfully managed.
- Temporary and permanent drainage shall not transfer flooding or erosion to neighbouring land or community infrastructure.

Minimum evidence: Drainage/erosion plan, inspection records, spoil tickets, restoration photographs and complaints log.

ENV-03 Water use and water pollution prevention

- Project water abstraction shall not materially reduce community supply or ecological flows; sources and quantities shall be documented.
- No untreated wastewater, concrete washout, oil, fuel, chemical or solid waste shall be discharged to land drains, streams or groundwater.
- Sanitary facilities shall be adequate, segregated where appropriate, maintained and connected to an approved containment or disposal system.
- Works near water shall use buffers, sediment control, spill prevention and emergency containment.
- Water quality monitoring shall be undertaken where the assessment, permit or incident risk requires it.

Minimum evidence: Water source approval, consumption log, sanitation inspection, discharge/monitoring records and spill reports.

ENV-04 Air quality, dust and emissions

- Dust shall be controlled through water application, covering loads, speed limits, route management, stabilisation and prompt restoration.
- Open burning of waste is prohibited. Equipment shall be maintained to minimise smoke and exhaust emissions.
- Sensitive receptors shall be identified; dusty or high-emission work shall be rescheduled or relocated where controls are ineffective.
- Complaints shall be investigated and corrective measures recorded.

Minimum evidence: Daily inspection, water/dust-control log, equipment maintenance records, complaint and monitoring records.

ENV-05 Noise and vibration

- Noisy activities shall be planned for acceptable daytime periods unless emergency or technically necessary work is approved and communicated.
- Low-noise equipment, silencers, barriers, distance and maintenance shall be used to minimise impact.
- Noise-generating equipment shall not idle unnecessarily near homes, schools, health facilities or places of worship.
- Monitoring shall be undertaken where receptors are close, complaints arise or permit limits require verification.

Minimum evidence: Work schedule, equipment records, community notices, complaints and monitoring results.

ENV-06 Waste hierarchy and housekeeping

- Waste shall be prevented or reduced first, then reused or recycled; remaining waste shall be segregated, stored safely and transferred to authorised handlers or approved disposal facilities.
- General, recyclable, organic, hazardous, e-waste and battery waste shall be separated and labelled.
- No waste shall be buried, dumped, burned or abandoned on site or in the community.
- Waste storage shall be secure, weather-protected where needed and designed to prevent leakage, scavenging and injury.
- Waste quantities, transporter details, destination and evidence of receipt shall be recorded.

Minimum evidence: Waste Management Plan, waste register, photographs, manifests, receipts and handler authorisation.

ENV-07 Hazardous materials, fuel and spill control

- A current inventory and Safety Data Sheets shall be maintained for fuel, oil, chemicals, gases and other hazardous materials.
- Storage shall use compatible containers, labels, restricted access, ventilation, fire controls and secondary containment appropriate to the maximum credible spill.
- Fuel transfer shall be supervised; drip trays, spill kits and trained responders shall be available.
- Spills shall be stopped where safe, contained, reported, cleaned and investigated; contaminated materials shall be managed as hazardous waste.
- Asbestos-containing materials, PCBs or other legacy hazards encountered on existing network assets shall not be disturbed until assessed and controlled by competent specialists.

Minimum evidence: Inventory, SDS file, storage inspection, spill drill, incident record and disposal evidence.

ENV-08 Solar panels, batteries, BESS and e-waste

- Suppliers shall provide product specifications, SDS where applicable, transport/storage instructions, warranty and end-of-life or take-back arrangements.
- Battery areas shall be designed for chemistry-specific ventilation, temperature control, separation, detection, fire response, access control and emergency isolation.
- Damaged, swollen, leaking, overheated or recalled batteries shall be isolated in a designated safe area and managed under manufacturer and emergency instructions.
- Batteries, inverters, meters, electronic boards, cables and PV modules shall not enter the general waste stream; chain of custody to authorised repair, take-back, recycling or disposal shall be maintained.
- Transport and storage state of charge, packaging and segregation shall follow manufacturer and applicable transport requirements.

Minimum evidence: Supplier due diligence, BESS inspection, battery register, damaged-item log, take-back agreement and chain-of-custody records.

ENV-09 Resource efficiency and climate resilience

- Design shall optimise energy yield, minimise technical losses and avoid unnecessary fuel, water and material consumption.
- Water and energy use during construction and operation shall be measured where practical and improvement opportunities reviewed.
- Flood level, drainage capacity, wind loading, lightning protection, heat, fire and access during extreme weather shall be considered in design and emergency planning.
- Critical equipment shall be located or protected to reduce foreseeable flood, erosion, heat and storm damage.

Minimum evidence: Design calculations/review, resource records, climate-risk actions, inspection and maintenance records.

ENV-10 Cultural heritage and chance finds

- Known cultural, archaeological, historical, religious and sacred places shall be identified during screening and avoided where practicable.
- Workers shall receive chance-find awareness before excavation.
- If a possible artefact, grave or cultural feature is found, work shall stop, the area shall be secured, access and information shall be controlled, and the relevant authority/community representatives shall be consulted before work resumes.
- No worker may remove, photograph for private use, sell or damage a find.

Minimum evidence: Consultation/assessment records, training, chance-find log, authority correspondence and release to resume work.

7. SOCIAL STANDARDS

SOC-01 Stakeholder engagement and information disclosure

- Stakeholder mapping shall identify affected communities, customers, women, youth, persons with disabilities, livelihood groups, traditional/religious leaders, local government, the DisCo, regulators and emergency/referral services.
- Information shall be timely, accurate, understandable, culturally appropriate and available in relevant local languages and accessible formats.
- Consultation shall occur before decisions are final and continue through construction, outages, energisation, tariff/service changes, operation and decommissioning.
- Women and vulnerable groups shall be consulted separately where this supports safe and meaningful participation.
- Consultation shall not create expectations of employment, compensation or free service that the project cannot lawfully meet.

Minimum evidence: SEP, stakeholder register, notices, minutes, attendance disaggregated where appropriate, issues/action log and disclosure copies.

SOC-02 Land access, acquisition and livelihood protection

- No land or right-of-way shall be used until ownership, users, customary interests, access and livelihood effects are verified and documented.
- Involuntary displacement shall be avoided; where unavoidable, required RAP/LRP processes, consultation and compensation at replacement cost shall be completed before possession or impact.
- Voluntary land donation shall only be used where permitted, fully informed, free from coercion, documented, independently verified, not causing significant livelihood loss and supported by an accessible GRM.
- Temporary access, crop damage, blocked routes and construction disturbance shall be recorded, restored and compensated where required.
- Forced eviction or use of land associated with unresolved illegal eviction is prohibited.

Minimum evidence: Land due diligence, agreements, census/assets record, compensation or restoration evidence, VLD checklist and grievance records.

SOC-03 Labour and working conditions

- Workers shall receive written terms in a language they understand, timely wages, lawful working hours, rest, leave, welfare, insurance/compensation arrangements and freedom to leave employment subject to lawful notice.
- Forced labour, retention of identity documents, recruitment fees charged to workers, trafficking and harmful child labour are prohibited.
- Age shall be verified before engagement. Persons under 18 shall not perform hazardous work, including electrical work, work at height, excavation, lifting, hot work, night work or battery/hazardous-material handling.
- Accommodation, where provided, shall be safe, sanitary, secure, non-discriminatory and separate from community homes unless formally arranged.
- Workers shall have confidential access to a worker GRM without retaliation.

Minimum evidence: Contracts, payroll, age verification, attendance, welfare inspection, worker GRM and contractor audit records.

SOC-04 Equal opportunity, gender and vulnerable-group inclusion

- Recruitment, pay, training, promotion, discipline and termination shall be based on legitimate job requirements without discrimination.
- Reasonable accommodation shall be considered for persons with disabilities where practicable and safe.
- Local employment and procurement processes shall be transparent and shall not be controlled by a single gatekeeper or used to solicit payments, sex or favours.
- Project benefits, connections, information and grievance channels shall be accessible to women-headed households, low-income users and other vulnerable groups within the approved project model.

Minimum evidence: Recruitment criteria, employment data, consultation records, accessibility actions and grievance trends.

SOC-05 SEA/SH, GBV and violence against children

- All workers, managers, contractors and security personnel shall sign and comply with the project Code of Conduct before access to site or community duties.
- Exchange of money, employment, goods, services, connection priority or project benefits for sex or sexual favours is prohibited.
- Sexual activity with any person under 18 is prohibited; mistaken belief about age or claimed consent is not a defence.
- Safe, confidential reporting and referral pathways shall be established and publicised without identifying survivors.
- Response shall be survivor-centred, respect informed consent and confidentiality, prioritise safety, avoid retaliation and use specialised services. Mandatory reporting involving children shall follow applicable law and best-interest principles.
- Ordinary grievance committees shall not investigate SEA/SH allegations or publicly disclose survivor details.

Minimum evidence: Signed CoC, induction/training records, confidential referral mapping, anonymised reporting, disciplinary records and service-provider agreements where available.

SOC-06 Community health, safety and traffic

- Sites, excavations, materials, poles, conductors, transformers, switchgear and BESS areas shall be fenced, guarded, covered, barricaded or otherwise secured against public access as appropriate.
- Traffic routes, delivery times, vehicle condition, driver competence, speed controls, reversing and pedestrian safety shall be planned with communities and authorities where needed.
- Community access to homes, farms, markets, schools, health facilities, water points and worship areas shall be maintained or safely diverted.
- Health and nuisance risks from dust, noise, wastewater, waste, communicable disease, vector breeding and worker influx shall be assessed and controlled.
- Outage, testing and energisation notices shall clearly explain timing, hazards and complaint/emergency contacts.

Minimum evidence: Community risk assessment, traffic plan, barriers/signage, vehicle checks, notices, inspections and complaint/incident records.

SOC-07 Security and human rights

- Security arrangements shall be proportionate to risk, respectful of human rights and governed by written instructions on conduct, escalation and use of force.
- Security personnel shall be screened, trained on the CoC, community interaction, SEA/SH, child safeguarding and grievance referral.
- Weapons shall not be brought onto project sites unless lawfully authorised and specifically approved under the security plan.
- Allegations against security personnel shall be recorded, escalated and addressed without retaliation.

Minimum evidence: Security risk assessment/plan, contracts, training, duty instructions, incident and grievance records.

SOC-08 Community and worker grievance mechanisms

- Separate community and worker GRMs shall provide verbal, written, phone, electronic and confidential channels as appropriate, at no cost to complainants.
- Grievances shall be acknowledged, screened, assigned, investigated, resolved and closed within published timelines; unresolved matters shall have escalation and appeal options.
- Anonymous grievances shall be accepted where sufficient information is available.
- Retaliation is prohibited and confidentiality shall be protected.
- SEA/SH and child-safeguarding disclosures shall be immediately referred through specialised confidential pathways rather than logged with identifying details in the general register.

Minimum evidence: GRM procedure, contact posters, registers, acknowledgements, resolution/appeal records and trend reports.

SOC-09 Local employment, procurement and community benefits

- Local opportunities shall be communicated openly with clear criteria and realistic numbers.
- Recruitment shall be conducted by authorised project personnel; no unofficial fees, political patronage or promises are permitted.
- Local suppliers shall meet quality, legal, labour, safety and environmental requirements; local sourcing shall not justify unsafe or illegal practices.
- Community support or corporate social responsibility commitments shall be documented, approved and separated from compensation and legal entitlements.

Minimum evidence: Vacancy notices, selection records, supplier due diligence, local content data and commitments register.

SOC-10 Privacy, records and respectful conduct

- Personal information collected for land, labour, customer, grievance, health or safeguarding purposes shall be limited to what is necessary and secured against unauthorised access.
- Photographs, interviews or disclosure of personal information shall require appropriate consent except where lawfully required for incident evidence.
- Workers shall respect community customs, property and privacy while complying with human rights and the Code of Conduct.

Minimum evidence: Consent forms, access-controlled records, data-sharing log and incident/grievance records.

8. OCCUPATIONAL HEALTH AND SAFETY STANDARDS

OHS-01 General OHS management and hierarchy of control

- Work shall be planned and supervised so hazards are eliminated or reduced before reliance on PPE.
- Each work area shall have a competent supervisor, adequate lighting, housekeeping, welfare, first aid, emergency access and clear responsibility for safety.
- Unsafe equipment or conditions shall be isolated and labelled until corrected.
- Workers shall be consulted on hazards and may stop unsafe work without retaliation.

Minimum evidence: Site HSE plan, risk register, inspection, toolbox talk, stop-work and corrective-action records.

OHS-02 Competence, induction and fitness for work

- Every person shall complete project and site induction before work and task-specific training before high-risk activities.
- Licences, trade competence and authorisation shall be verified for electricians, operators, drivers, riggers, welders, first aiders, rescue personnel and others whose work requires competence.
- Workers shall be fit for assigned work and shall not work under the influence of alcohol, illegal drugs or impairing substances.
- Fatigue, heat stress, medical restrictions and language/literacy needs shall be considered in work planning.

Minimum evidence: Induction register, competency matrix, licences/certificates, medical/fitness records where lawful and supervisor checks.

OHS-03 Personal protective equipment

- PPE shall be selected from the risk assessment, meet recognised standards, fit the user, be provided at no cost, maintained and replaced when damaged or expired.
- Minimum site PPE shall be defined by area; additional protection shall be used for electrical, height, hot work, chemical, noise, dust, lifting and traffic hazards.
- PPE does not replace elimination, isolation, engineering controls or safe systems of work.

Minimum evidence: PPE matrix, issue register, inspection/replacement records and observations.

OHS-04 Permit-to-work and simultaneous operations

- A PTW system shall control electrical isolation/energisation, hot work, confined space, excavation, lifting, work at height and other high-risk activities identified by the project.
- Permits shall specify scope, hazards, isolations, controls, validity, responsible persons, suspension conditions and close-out.
- Simultaneous operations shall be reviewed to prevent conflicting work, backfeed, dropped objects, traffic conflict, fire or unauthorised access.

Minimum evidence: Permit register, permits, isolations, gas tests where applicable, handback and close-out records.

OHS-05 Electrical safety, isolation and LOTO

- All conductors and equipment shall be treated as energised until isolated, locked/tagged, tested for dead and, where required, discharged and earthed by authorised competent persons.
- Isolation shall account for all sources, including DisCo supply, mini-grid generation, BESS, standby generation, control circuits and induced/backfeed sources.
- Live work is prohibited except where de-energisation is demonstrably infeasible, written justification and risk assessment are approved, competent persons and special controls are provided, and applicable law/DisCo procedure allows it.
- Only authorised persons may remove locks, operate switchgear, change protection settings or issue/receive electrical permits.
- Arc-flash and shock risks shall be assessed; boundaries, tools, test instruments and PPE shall be selected accordingly.

Minimum evidence: Approved single-line diagram, switching/LOTO procedure, authorisation list, permit, test instrument calibration and isolation record.

OHS-06 Work at height and fall prevention

- Work at height shall be avoided where practicable. Safe access platforms, guardrails or other collective protection shall take priority over personal fall arrest.
- Ladders shall be inspected, secured and used only for appropriate short-duration work; makeshift access is prohibited.
- Fall-arrest systems shall have compatible certified components, suitable anchors, inspection and a rescue plan that does not rely solely on public emergency services.
- Open edges, roof work and pole climbing shall be controlled by trained and medically fit persons under an approved method and PTW where required.

Minimum evidence: Method/JSA, PTW, equipment inspection/certification, anchor plan, rescue drill and supervisor record.

OHS-07 Excavation and underground services

- Excavation shall not start until underground services, ownership, access and permits are checked and the work area is barricaded.
- Collapse shall be prevented by sloping, shoring, benching or shielding based on soil and depth; spoil and equipment shall be kept back from edges.
- Safe access/egress, water control, atmospheric testing where relevant and daily competent-person inspection shall be provided.
- Open excavations shall be covered or securely barricaded and illuminated where public exposure exists.

Minimum evidence: Excavation permit, service survey, daily inspection, shoring design where needed and closure/restoration record.

OHS-08 Lifting operations and material handling

- Lifts shall be planned by a competent person; cranes, hoists, slings, shackles and lifting points shall be certified, inspected and suitable for load and ground conditions.
- Exclusion zones and clear communication shall be maintained; no person shall stand beneath a suspended load.
- Critical or unusual lifts shall have a written lift plan and pre-lift briefing.
- Manual handling shall be reduced through mechanical aids, team lifting and task redesign.

Minimum evidence: Lift plan, equipment certificates/inspections, operator/rigger competence and pre-lift checklist.

OHS-09 Hot work, fire prevention and compressed gases

- Hot work outside a designated safe workshop shall require a permit, removal/protection of combustibles, suitable extinguishers, ventilation and fire watch during and after work.
- Gas cylinders shall be identified, secured upright, separated as appropriate, protected from heat and transported with caps/trolleys.
- Smoking shall be restricted to designated safe areas away from fuel, batteries, vegetation and public areas.
- Fire detection, alarm, extinguishing media, access and emergency shutdown shall match the equipment and approved fire risk assessment.

Minimum evidence: Hot-work permit, fire watch record, extinguisher inspection, cylinder register and fire drill.

OHS-10 Confined space

- A confined-space inventory shall be maintained. Entry shall be avoided where practicable and shall require a permit, isolation, atmospheric testing, ventilation, trained entrant/attendant, communications and rescue arrangements.
- No person shall enter for rescue unless trained, equipped and authorised under the rescue plan.

Minimum evidence: Inventory, permit, gas-test calibration/results, entrant/attendant training and rescue drill.

OHS-11 Tools, machinery, temporary power and housekeeping

- Tools and machinery shall be suitable, guarded, maintained and inspected; defective equipment shall be tagged out.
- Temporary electrical systems shall use suitable protection, earthing, cable management and weather-resistant equipment; unauthorised connections are prohibited.
- Work areas, access routes and emergency exits shall be kept clear; protruding objects, loose materials and trip hazards shall be controlled.

Minimum evidence: Inspection registers, maintenance, electrical tests, housekeeping checks and corrective actions.

OHS-12 Transport and driving safety

- Drivers shall be licensed, fit, rested and authorised; seat belts and approved helmets for motorcycles shall be mandatory.
- Vehicles shall be roadworthy, inspected and maintained; passengers shall not be carried in unsafe cargo areas.
- Journey management shall address route, weather, night driving, speed, loading, reversing, communication and emergency response.
- Mobile-phone use while driving and driving under the influence are prohibited.

Minimum evidence: Driver file, vehicle checklist, maintenance, journey plan, GPS/speed record where used and incident reports.

OHS-13 Occupational health, welfare and hygiene

- Adequate drinking water, toilets, handwashing, shade/rest, changing and eating areas shall be provided and maintained.
- Heat, noise, dust, vibration, ergonomic, chemical, biological and psychosocial exposures shall be assessed and controlled.
- Health surveillance shall be provided where required by law or risk and handled confidentially.
- First aiders, kits and access to appropriate medical care shall be proportionate to workforce, location and hazards.

Minimum evidence: Welfare inspection, exposure assessment, health surveillance where applicable, first-aid inventory and treatment log.

OHS-14 Incident, near-miss and occupational disease management

- All injuries, illnesses, environmental incidents, property damage, security events, electrical trips/faults and near misses shall be reported promptly.
- Serious incidents shall be notified immediately to senior management and within required external timelines; the scene shall be preserved where safe and lawful.
- Investigations shall identify immediate, underlying and management-system causes and assign corrective actions with accountable owners and due dates.
- Lessons shall be communicated without disclosing confidential personal or survivor information.

Minimum evidence: Incident notice, investigation, root-cause analysis, action tracker, external notification and lessons-learned record.

9. INTERCONNECTED MINI-GRID TECHNICAL ESHS STANDARDS

These requirements address the additional hazards created by connecting project generation and storage to an existing DisCo network. They shall be read with approved electrical standards, the interconnection agreement, DisCo switching rules and manufacturer instructions.

IMG-01 Asset ownership, boundaries and operating authority

- The PCC, asset ownership, maintenance duties, access rights, switching authority, meter responsibility, protection ownership and emergency responsibilities shall be documented before construction and energisation.
- Field labels, one-line diagrams, asset registers and handover documents shall reflect the agreed boundaries.
- No project or DisCo person shall operate equipment outside authorised responsibility except under an agreed emergency procedure.

Minimum evidence: Executed agreement or responsibility matrix, approved single-line diagram, asset register, labels and authorisation list.

IMG-02 Protection coordination, anti-islanding and settings control

- Protection studies and settings shall be prepared by competent engineers and approved by the responsible parties before energisation.
- Anti-islanding, synchronisation, reverse-power, voltage, frequency, fault-level, earthing and reclosing interactions shall be addressed.
- Protection settings shall be controlled, recorded and protected from unauthorised change. Any change shall use management-of-change and joint approval.

Minimum evidence: Protection study, approved settings, relay test results, sealed/controlled records and change log.

IMG-03 Outage planning and service continuity

- Planned outages shall be jointly authorised, scheduled to minimise disruption and communicated to affected customers with timing, safety advice and contact channels.
- Critical users such as health facilities, water systems or communication services shall be identified and reasonable continuity or contingency arrangements considered within the project scope.
- Unplanned interruptions shall be recorded, safely restored under switching authority and communicated promptly.

Minimum evidence: Outage permit/programme, customer notices, critical-user register, restoration record and complaints.

IMG-04 Testing, commissioning and controlled energisation

- A commissioning plan shall define tests, hold points, responsibilities, instruments, acceptance criteria, temporary supplies, exclusion zones and emergency arrangements.
- Pre-energisation checks shall confirm construction completion, earthing, insulation, polarity, phase sequence, protection, labelling, barriers, fire systems, housekeeping, drawings and customer/network readiness.
- Energisation shall follow an approved switching programme with authorised issuer/receiver, LOTO status control, clear communications and a stop criterion for abnormal results.
- Temporary links, test leads and bypasses shall be removed or formally documented before handover.

Minimum evidence: Commissioning plan, calibration, signed test sheets, pre-energisation checklist, switching record and handover certificate.

IMG-05 Public electrical safety and network rehabilitation

- Poles, conductors, stays, transformers, switchgear and service connections shall meet approved clearances, mechanical integrity, earthing, guarding and labelling requirements.
- Damaged or unsafe legacy assets identified within the project influence area shall be isolated, repaired or formally transferred to the responsible party with tracked action.
- No conductor shall be left at accessible height, no open joint or exposed live part shall remain, and abandoned equipment shall be removed or made permanently safe.
- Vegetation management shall protect clearances without uncontrolled herbicide use or unnecessary habitat damage.

Minimum evidence: Network inspection, test and as-built records, defect/action register, public-safety signage and vegetation records.

IMG-06 Customer connections, meters and internal wiring interface

- Only authorised competent persons may install or alter service connections and meters.
- Customer notices shall explain safe use, meter/tariff arrangements, prohibited bypass or tampering, emergency isolation and complaint channels.
- Unsafe customer installations discovered during connection shall not be energised until the condition is corrected under the approved customer-connection process.
- Personal data and consumption information shall be protected and accessed only for authorised purposes.

Minimum evidence: Connection checklist, meter seal/register, customer acknowledgement, rejected/rectified installation record and data-access controls.

IMG-07 Power quality, equipment condition and electrical fire prevention

- Voltage, frequency, harmonics, loading, temperature and other relevant parameters shall be monitored and maintained within applicable requirements.
- Overload, loose connections, overheating, insulation degradation and abnormal protection operations shall be investigated promptly.
- Thermal inspection or other condition monitoring shall be used where risk and equipment importance justify it.
- Electrical rooms shall remain dry, secure, ventilated as designed and free of incompatible storage.

Minimum evidence: SCADA/meter trends, inspection/maintenance, thermal reports where used, trip/fault investigation and corrective actions.

IMG-08 O&M, emergency switching and decommissioning

- O&M procedures shall define access, isolation, switching, maintenance intervals, spares, vegetation, battery care, public reporting and emergency response.
- Emergency switching contacts and authority shall be available at all times appropriate to the operating arrangement.
- Decommissioning or transfer shall include electrical isolation, asset inventory, waste and battery management, contaminated-site assessment, land restoration, customer communication and records handover.

Minimum evidence: O&M manual, maintenance schedule, emergency roster, decommissioning/transfer plan and completion records.

10. EMERGENCY PREPAREDNESS AND RESPONSE

10.1 Emergency planning

ERP-01 **Project Emergency Response Plan**

- A site-specific ERP shall address credible scenarios including electric shock/arc flash, fire, BESS thermal event, fuel/chemical spill, severe weather/flooding, traffic accident, structural collapse, security threat, medical emergency and community exposure.
- The ERP shall define alarm, command, contacts, evacuation, muster, shutdown, first aid, rescue, spill containment, fire response, communication, external support and recovery.
- Plans shall be coordinated with the DisCo, local emergency services, health facilities, fire service, community leadership and specialised battery/manufacturer support where applicable.

Minimum evidence: Approved ERP, posted contacts/maps, equipment inspection, mutual-aid confirmation and distribution record.

10.2 Drills and readiness

- Emergency equipment shall be inspected at defined intervals and after use.
- Drills shall be conducted at least as required by the ESMP/ERP and after major changes; scenarios shall include electrical isolation and, where relevant, BESS/fire and community interface.
- Drills shall be evaluated for alarm, attendance, response time, communication, role clarity, equipment and lessons; actions shall be tracked to closure.
- Real incidents and drills shall not expose workers or communities to unnecessary risk.

10.3 Medical and rescue arrangements

- First-aid and rescue capacity shall reflect travel time to medical care, workforce size and the highest-risk tasks.
- Work at height, confined space and electrical activities shall not rely solely on public responders for immediate rescue.
- Emergency transport and receiving facilities shall be identified and periodically reconfirmed.
- Personal medical information shall remain confidential and only necessary information shall be shared for care or legal reporting.

11. CONTRACTOR, SUPPLIER AND SUPPLY-CHAIN STANDARDS

CON-01 Prequalification and contract requirements

- Contractors shall be evaluated for legal compliance, experience, ESHS competence, incident history, staffing, equipment, insurance and ability to implement these Standards.
- Contracts shall include ESHS specifications, Code of Conduct, reporting timelines, audit rights, stop-work rights, remedies, payment linkage and requirements to flow obligations to subcontractors.
- Mobilisation shall not be approved until the contractor C-ESMP/HSE Plan, organogram, competencies, method statements, emergency arrangements and worker records are accepted.

Minimum evidence: Prequalification, contract clauses, mobilisation checklist and approval.

CON-02 Contractor implementation and supervision

- The contractor shall provide competent ESHS staff proportionate to risk and maintain daily supervision.
- Subcontractors and casual workers shall receive the same protections, induction, PPE, welfare and grievance access as direct contractor workers.
- Non-conformance shall be corrected within agreed deadlines; imminent danger requires immediate stop-work.
- Repeated or serious breach may lead to withholding payment, removal of personnel, suspension or termination, without limiting legal reporting.

Minimum evidence: C-ESMP, staffing, inspection, non-conformance register, payment review and disciplinary/contract records.

CON-03 Supplier and product stewardship

- PV, battery, inverter, switchgear, transformer, cable, meter and safety-equipment suppliers shall provide specifications, test/certification evidence, installation/maintenance instructions and end-of-life information.
- Battery and electronic-equipment procurement shall include take-back, authorised recycling or other lawful end-of-life arrangements where practicable.
- Supply-chain due diligence shall address forced labour, harmful child labour, counterfeit products, hazardous substances and illegal waste transfer proportionate to risk.
- Defective, recalled or non-conforming products shall be quarantined and controlled.

Minimum evidence: Approved supplier list, product certificates, manuals, warranty/take-back terms, inspection and non-conformance records.

12. IMPLEMENTATION, MONITORING, REPORTING AND AUDIT

12.1 Implementation planning

The ESHS Manager shall translate these Standards into site-specific plans, method statements, checklists, responsibilities, budget and schedule. Each requirement shall have an accountable owner and objective evidence. Requirements shall be integrated into procurement, design reviews, construction programme, commissioning and O&M planning.

12.2 Minimum monitoring frequency

Activity	Minimum frequency / trigger	Primary record
Worker pre-start and site condition check	Daily during active work	Daily log / toolbox record
High-risk task and PTW verification	Before and during each task	Permit, JSA and supervisor check
General ESHS inspection	Weekly during active construction; risk-based during O&M	Inspection checklist and action tracker
Waste, hazardous materials and battery inspection	Weekly or more often where risk requires	Registers, photographs and manifests
Community interface and grievance review	At least monthly and before/after major outages or disruptive works	Engagement/GRM report
Contractor performance review	Monthly and before payment milestones	Scorecard and action closure
Management ESHS review	Quarterly during construction; at least annually during operation	Management review minutes
Emergency drill	Per ERP and after material change or serious learning need	Drill report and action tracker
Legal/permit register review	Before mobilisation and at least annually or on change	Updated register and compliance evaluation

12.3 Key performance indicators

- Fatalities, lost-time injuries, medical-treatment cases, first-aid cases, near misses and total exposure hours.
- Electrical incidents, protection trips, unplanned outages, public electrical-safety defects and closure time.
- Serious environmental incidents, spills, waste generated/recycled/disposed, battery/e-waste chain-of-custody completion and restoration status.
- Workers inducted and trained; PPE compliance; permits audited; corrective actions overdue.
- Workers by local/non-local status and gender where lawful and useful; labour grievances and resolution time.
- Community engagements, grievances, resolution/appeal status, outage complaints and vulnerable-group participation.
- SEA/SH data only in anonymised, non-identifying form and limited to authorised reporting requirements.

12.4 Incident and external reporting

Serious incidents shall be communicated immediately through the project escalation chain and notified to REA/DARES, the DisCo, regulators, emergency services, insurers or lenders within applicable timelines. Reports shall be factual, protect confidentiality, avoid speculation and be updated as verified information becomes available.

12.5 Audits and management review

- Internal audits shall verify compliance with these Standards, the ESMS, ESMP, contracts, permits and legal requirements.
- Contractors and suppliers shall permit reasonable inspection and audit of relevant sites and records.
- Management review shall consider performance, incidents, grievances, audits, legal changes, stakeholder feedback, resource adequacy, emerging risks and improvement actions.
- Corrective actions shall state the cause, owner, due date, verification method and closure evidence. Closure by assertion without evidence is not acceptable.

13. LEGAL COMPLIANCE, COMMUNICATION AND CONTINUOUS IMPROVEMENT

13.1 Legal and permit compliance

- A legal and permit register shall identify applicable approvals, conditions, reporting dates, renewal dates and responsible persons.
- Construction, interconnection, operation and waste transfer shall not proceed where a required approval has expired or is absent.
- Compliance evaluations shall be documented and deviations escalated for immediate correction and, where required, regulator notification.

13.2 Communication and consultation

- These Standards shall be communicated to all employees and contractors through induction, contract documents, toolbox talks, notice boards and supervision.
- Relevant requirements and emergency/grievance contacts shall be disclosed to communities and customers in accessible form.
- Official external communication shall be accurate, authorised and consistent with confidentiality and incident-reporting protocols.

13.3 Document and record control

- Controlled documents shall have title, number, version, date, owner and approval. Obsolete versions shall be removed from points of use or clearly marked.
- Records shall be legible, dated, attributable, secure and retained for the period required by law, contract or the ESMS.
- Confidential grievance, medical, personnel and safeguarding records shall have restricted access.

13.4 Continuous improvement

- The Standards shall be reviewed at least annually and after serious incidents, major design or regulatory changes, audit findings or significant stakeholder feedback.
- Lessons from inspections, incidents, grievances, drills and operations shall be converted into revised procedures, training, design or resources.
- Performance objectives and targets shall be measurable, time-bound and reviewed by management.

14. MANAGEMENT COMMITMENT AND ADOPTION

The management of Promass Engineering Services Limited is fully committed to the implementation of these Standards. Management shall provide competent personnel, adequate finance, equipment, training and authority and shall ensure ESHS performance is considered in procurement, scheduling, payment, promotion and contractor evaluation.

> **Management commitment:** No commercial, schedule or production objective takes priority over the prevention of fatality, serious injury, material environmental harm, unlawful displacement, abuse, exploitation or unsafe energisation.

These Standards become effective for the project when approved and when Annex A is completed with project-specific responsibilities and contacts. Every contractor shall formally acknowledge the Standards using Annex M, and the adoption page in Annex N shall be signed by authorised Promass management.

ANNEX A: PROJECT PARTICULARS AND ESHS COMMITMENT SHEET

Project information	To be completed before submission / mobilisation
Project title	Proposed DARES Interconnected Mini-grid Project
REA/DARES reference	_____
State / LGA / community	_____
Installed generation capacity	_____
Battery/BESS capacity and chemistry	_____
Distribution Company (DisCo)	_____
Point of Common Coupling	_____
Existing network / associated facilities	_____
Land ownership / tenure / area	_____
Primary host communities / customer groups	_____
Construction period / planned energisation	_____
O&M arrangement	_____

Approvals and instruments

Item	Reference / date / status
REA/DARES screening and approval	_____
Environmental assessment / ESMP approval	_____
Land agreement / VLD / RAP/LRP evidence	_____
NERC / mini-grid approvals	_____
Interconnection agreement with DisCo	_____
Planning / development / road / fire permits	_____
C-ESMP and contractor mobilisation approval	_____
Emergency Response Plan	_____

Named ESHS responsibilities

Role	Name	Phone / email
Project Director	_____	_____
Environmental and Social Manager	_____	_____
HSE Manager / Site HSE Officer	_____	_____
Engineering / Interconnection Lead	_____	_____
Community Liaison Officer	_____	_____
Worker GRM focal person	_____	_____
Community GRM focal person	_____	_____
Confidential SEA/SH referral contact	_____	_____
DisCo switching / emergency contact	_____	_____

Commitment

Promass Engineering Services Limited commits to implement these Standards, the ESMS, the project Code of Conduct and all approved site-specific instruments and permit conditions. The project shall provide the resources necessary to prevent harm and correct non-compliance.

Environmental and Social Manager	Project Director	Dr Sani Mohammed Bida, MD/CEO
Name / signature / date	Name / signature / date	Signature / date

ANNEX B: MASTER ESHS STANDARDS AND PERFORMANCE REGISTER

ID	Topic	Minimum performance criterion	Evidence
MGT-01	Stop-work and escalation	All imminent-danger work stopped and released only after controls.	Stop-work record; release approval
MGT-02	Screening before commitment	100% of sites/routes/major changes screened before commitment.	Screening checklist; decision
MGT-03	Safe and sustainable design	All design ESHS actions closed before issue for construction.	Design review; hazard log
MGT-04	JSA and method statement	100% of high-risk tasks covered and briefed.	JSA; method; attendance
MGT-05	Management of change	No material change implemented without ESHS review.	Change request; approvals
ENV-01	Biodiversity and vegetation	No unauthorised clearance; restoration completed.	Clearing/restoration records
ENV-02	Soil, erosion and drainage	No uncontrolled erosion, blocked drainage or unmanaged spoil.	Inspections; disposal/restoration
ENV-03	Water and wastewater	No untreated discharge or material impact on community supply.	Water/sanitation records
ENV-04	Dust and emissions	Effective controls and complaints promptly resolved.	Daily log; maintenance; complaints
ENV-05	Noise and vibration	Work within applicable conditions and receptors protected.	Notices; monitoring; complaints
ENV-06	Waste	No burning/burial/dumping; full lawful chain of custody.	Registers; manifests; receipts
ENV-07	Hazardous materials	100% inventoried, labelled, contained and spill-ready.	Inventory; SDS; inspections
ENV-08	Battery and e-waste	No disposal with general waste; traceable end-of-life route.	Battery/e-waste register
ENV-09	Resource/climate resilience	Design and O&M actions implemented.	Design review; monitoring
ENV-10	Cultural heritage	Chance-find procedure applied; no unauthorised disturbance.	Training; find log; release
SOC-01	Stakeholder engagement	Timely disclosure and meaningful participation throughout lifecycle.	SEP records; action log
SOC-02	Land and livelihoods	No use before due diligence/compensation; no forced eviction.	Land/RAP/LRP/VLD evidence
SOC-03	Labour conditions	Written terms; no forced/harmful child labour; worker GRM active.	HR/GRM records
SOC-04	Equality and inclusion	Transparent recruitment and no discrimination.	Recruitment/training data
SOC-05	SEA/SH, GBV, VAC	100% CoC signature/training; confidential referral path active.	CoC; training; anonymised data
SOC-06	Community safety/traffic	No uncontrolled public exposure; access maintained.	Plans; barriers; incidents
SOC-07	Security and rights	Security trained, proportionate and accountable.	Plan; training; incidents
SOC-08	GRMs	Accessible channels; timely resolution; no retaliation.	Registers; closure/appeal
SOC-09	Local opportunities	Open criteria; no unofficial fees or false promises.	Notices; selection records
SOC-10	Privacy and conduct	Personal data secured and respectful conduct maintained.	Consent/access records
OHS-01	General OHS	Competent supervision and hierarchy of control applied.	HSE plan; inspections
OHS-02	Competence/fitness	100% inducted and verified for assigned tasks.	Training/competence matrix
OHS-03	PPE	Suitable PPE provided, used and maintained.	Issue/inspection records
OHS-04	PTW	100% applicable high-risk work permitted and closed.	Permit register
OHS-05	Electrical/LOTO	No unauthorised live work or switching; all sources isolated.	LOTO/permit/switching records
OHS-06	Work at height	Collective protection/rescue provided; equipment certified.	PTW; inspection; rescue drill
OHS-07	Excavation	Services checked; collapse/public access controlled.	Permit; daily inspection
OHS-08	Lifting	Planned, certified and exclusion zone maintained.	Lift plan/certificates
OHS-09	Hot work/fire	Permitted hot work and fire readiness.	Permit; equipment checks
OHS-10	Confined space	No entry without isolation, testing and rescue.	Permit; gas tests; drill
OHS-11	Tools/temporary power	No defective/unprotected equipment in use.	Inspection/maintenance
OHS-12	Transport	Licensed, fit drivers and roadworthy vehicles.	Driver/vehicle/journey records
OHS-13	Health/welfare	Adequate welfare, exposure controls and first aid.	Inspections; health records
OHS-14	Incident management	All incidents reported, investigated and actions closed.	Incident/action tracker

ID	Topic	Minimum performance criterion	Evidence
IMG-01	Boundaries/authority	Written asset and operating responsibility before energisation.	Agreement; diagrams; labels
IMG-02	Protection/anti-islanding	Approved studies/settings and controlled changes.	Study; relay test; settings
IMG-03	Outage/service continuity	Authorised outages and timely customer notices.	Programme; notices; records
IMG-04	Commissioning/energisation	All hold points passed and switching programme signed.	Test sheets; checklist
IMG-05	Public electrical safety	No accessible live part or unresolved critical defect.	Network inspection/actions
IMG-06	Customer connections	Only safe approved connections energised.	Connection/meter records
IMG-07	Power quality/condition	Abnormal trends, trips and heating investigated.	Monitoring/maintenance
IMG-08	O&M/decommissioning	Approved O&M and end-of-life controls in place.	Manuals; schedules; plan
ERP-01	Emergency response	Current ERP, equipment, coordination and drills.	ERP; inspections; drill reports
CON-01	Prequalification/contracts	All contracts contain enforceable ESHS requirements.	Evaluation; clauses
CON-02	Contractor performance	C-ESMP implemented; non-conformance corrected.	Inspections; scorecard
CON-03	Product stewardship	Verified products and lawful end-of-life arrangements.	Supplier/product records

ANNEX C: PRE-CONSTRUCTION AND MOBILISATION CHECKLIST

Requirement	Complete	Evidence / reference
Project screening and exclusion criteria completed	[ ]	
Project risk classification and required instruments confirmed	[ ]	
Site-specific ESIA/ESMP and approvals in place where required	[ ]	
Land ownership/users/rights-of-way verified and agreements complete	[ ]	
RAP/LRP/VLD process completed where applicable	[ ]	
NERC/REA/DisCo and interconnection approvals available	[ ]	
Other environmental, planning, road, fire and local permits available	[ ]	
Detailed design ESHS review and action closure complete	[ ]	
DisCo responsibility matrix, single-line diagram and switching authority agreed	[ ]	
Contractor prequalification and ESHS clauses complete	[ ]	
C-ESMP/HSE Plan, organogram and competent staff approved	[ ]	
Method statements, JSAs and PTW arrangements approved	[ ]	
Worker terms, age verification, CoC and worker GRM ready	[ ]	
Stakeholder notices, SEP and community GRM ready	[ ]	
SEA/SH referral pathway and confidential contacts verified	[ ]	
Waste handlers, battery take-back and spill arrangements confirmed	[ ]	
Emergency Response Plan, medical/fire contacts and equipment ready	[ ]	
PPE, tools, test instruments, lifting/access equipment inspected/certified	[ ]	
Baseline photographs/monitoring and sensitive receptors recorded	[ ]	
ESHS budget and monitoring/reporting schedule approved	[ ]	

Mobilisation approval: Work may begin only when all applicable items are complete or an authorised written action plan demonstrates that the remaining item does not create legal, safety, environmental or social exposure. Imminent-danger and legal prerequisites cannot be deferred.

ANNEX D: PERMIT-TO-WORK AND HIGH-RISK ACTIVITY MATRIX

Activity	Required control document	Minimum checks
Electrical isolation / energisation	Electrical permit; LOTO; switching programme	All sources identified; authorised persons; test for dead; earth/discharge; handback
Live electrical work - exceptional only	Special written approval and electrical permit	Demonstrated infeasibility of isolation; legal/DisCo allowance; arc/shock assessment; rescue
Hot work	Hot-work permit	Combustibles controlled; ventilation; fire watch; suitable extinguishers; post-work check
Confined-space entry	Confined-space entry permit	Isolation; atmosphere testing; ventilation; attendant; communications; rescue
Excavation / trenching	Excavation permit	Service check; shoring/slope; edge control; access; water/public protection
Work at height / pole climbing	Work-at-height permit where project procedure requires	Safe access; collective protection; certified equipment; rescue plan
Lifting operation	Lift plan / permit for critical lifts	Competent planner; certified equipment; ground; exclusion zone; communication
Road or public-right-of-way work	Traffic / access permit or authority approval	Traffic control; pedestrian access; community notice; lighting/barriers
Fuel transfer / major hazardous-material handling	Task permit or controlled procedure	SDS; containment; ignition control; spill response; trained persons
Testing and commissioning	Commissioning permit / approved test sheet	Boundaries; temporary supplies; exclusion zone; calibrated instruments; hold points

Permit rules

- The issuer and receiver shall be competent and authorised; the permit shall be understood at the work location.
- A permit is valid only for the stated scope, location, people and time. Shift change, alarm, weather change, conflicting work or changed condition may require suspension and reissue.
- Close-out shall confirm people, tools, temporary earths, test leads, bypasses and waste are removed and the work area is safe for handback.

ANNEX E: ESHS INSPECTION CHECKLIST

Inspection item	Status	Observation / action / owner / due date
Permits, drawings, JSA and method statements available/current	[ ] S [ ] U [ ] N/A	
Workers inducted, competent, fit and wearing required PPE	[ ] S [ ] U [ ] N/A	
Housekeeping, access, lighting, welfare and first aid adequate	[ ] S [ ] U [ ] N/A	
Electrical isolation/LOTO, barriers and authorisations compliant	[ ] S [ ] U [ ] N/A	
Work at height, ladders/scaffolds and rescue arrangements compliant	[ ] S [ ] U [ ] N/A	
Excavations/services/shoring/public protection compliant	[ ] S [ ] U [ ] N/A	
Lifting equipment, plan and exclusion zone compliant	[ ] S [ ] U [ ] N/A	
Tools, machinery, temporary power and fire controls compliant	[ ] S [ ] U [ ] N/A	
Vehicles, drivers, traffic and community access controlled	[ ] S [ ] U [ ] N/A	
Dust, noise, drainage, erosion and vegetation controls effective	[ ] S [ ] U [ ] N/A	
Waste segregated; no burning/burial; records and handler route available	[ ] S [ ] U [ ] N/A	
Fuel/chemicals labelled, contained; SDS and spill kits available	[ ] S [ ] U [ ] N/A	
Batteries/e-waste secure; damaged items isolated; register current	[ ] S [ ] U [ ] N/A	
Community notices, barriers, grievance information and access adequate	[ ] S [ ] U [ ] N/A	
CoC, SEA/SH confidential referral and non-retaliation arrangements active	[ ] S [ ] U [ ] N/A	
Land/crop/property boundaries respected; restoration actions current	[ ] S [ ] U [ ] N/A	
Emergency contacts, equipment, exits and muster points current	[ ] S [ ] U [ ] N/A	
Previous corrective actions verified and closed	[ ] S [ ] U [ ] N/A	

Inspection details: Date/time: _____ Site/area: _____ Inspector(s): _____ Weather/conditions: _____

Status: S = Satisfactory; U = Unsatisfactory; N/A = Not applicable. Any imminent danger requires immediate stop-work and escalation.

ANNEX F: INCIDENT NOTIFICATION AND INVESTIGATION FORM

Field	Details
Incident reference	_____
Date / time / location	_____
Reported by / contact	_____
Incident type	[ ] Injury/illness [ ] Electrical [ ] Environmental [ ] Traffic [ ] Security [ ] Community [ ] Property [ ] Near miss [ ] Other
People affected	_____
Immediate condition and factual description	_____
Immediate actions / first aid / isolation / containment	_____
Emergency and external services contacted	_____
Immediate internal notification	Name/time: _____
REA/DARES / DisCo / regulator / insurer notification	Organisation / name / time / reference: _____
Scene preserved and evidence secured	[ ] Yes [ ] No [ ] Not applicable - reason: _____
Confidential or safeguarding information present	[ ] Yes - restricted handling required [ ] No

Investigation

Investigation item	Findings
What happened?	_____
Immediate causes	_____
Underlying causes	_____
Management-system causes	_____
Actual and potential severity	_____
Corrective actions, owner and due date	_____
Verification and closure evidence	_____
Lessons communicated to	_____

Confidentiality: SEA/SH, child safeguarding and sensitive medical information shall not be recorded in this general form beyond the minimum non-identifying information required for escalation. Use the approved confidential referral and case-management pathway.

ANNEX G: WASTE, HAZARDOUS MATERIALS AND SPILL REGISTERS

G1. Waste movement register

Date	Waste type / classification	Quantity	Storage / transporter	Destination / handler authorisation	Manifest / receipt

G2. Hazardous-material inventory

Material	Quantity / location	SDS date	Containment / compatibility	Expiry / inspection	Responsible person

G3. Spill record

Reference / date	Material / estimated quantity	Location / receptor	Containment and clean-up	Waste route	Cause / action / closure

ANNEX H: BATTERY AND E-WASTE CHAIN-OF-CUSTODY REGISTER

Asset/ waste ID	Equipment / chemistry	Serial / quantity	Condition and reason removed	Temporary storage controls	Recipient / date / authorisation	Final treatment evidence

Minimum handover checks

- Item identified, de-energised and terminals protected against short circuit.
- Damaged or leaking item packaged/isolated using chemistry-specific instructions.
- Weight/quantity and serial numbers reconciled with asset register where applicable.
- Transporter and recipient authorised for the waste/equipment type.
- Receipt, recycling, take-back, repair or final disposal evidence attached.
- No cross-border transfer unless lawful and compliant with applicable waste-shipment requirements.

ANNEX I: INTERCONNECTION, TESTING AND ENERGISATION CHECKLIST

Check	Pass	Evidence / result / reference
Approved interconnection agreement / responsibility matrix available	[ ]	
Approved single-line diagram and as-built drawings current	[ ]	
Asset boundaries, labels and switching authority confirmed	[ ]	
Protection study/settings approved and relay tests passed	[ ]	
Anti-islanding, synchronisation and reverse-power functions tested	[ ]	
Earthing/bonding, continuity, insulation and polarity tests passed	[ ]	
Phase sequence, voltage/frequency and meter checks passed	[ ]	
All construction defects and critical punch-list items closed	[ ]	
Guards, barriers, locks, warning signs and public protection complete	[ ]	
BESS fire/ventilation/detection/emergency isolation operational	[ ]	
Temporary earths, test links, bypasses and leads accounted for	[ ]	
Electrical rooms dry, clean, clear and access controlled	[ ]	
Commissioning instruments calibrated and test sheets signed	[ ]	
Approved switching programme and authorised issuer/receiver confirmed	[ ]	
Customer/community outage and energisation notices issued	[ ]	
Emergency contacts, medical/fire support and communications ready	[ ]	
DisCo/Promass joint pre-energisation meeting completed	[ ]	
Final authorisation to energise signed by accountable parties	[ ]	

Promass Interconnection Lead	DisCo Authorised Representative	Project Director / Authorising Manager
Name / signature / date / time	Name / signature / date / time	Name / signature / date / time

ANNEX J: EMERGENCY CONTACTS AND DRILL RECORD

J1. Emergency contacts

Service / role	Name / organisation	Primary contact	Alternate contact / location
Project emergency controller			
Site HSE / first aider			
DisCo switching / control room			
Nearest health facility / ambulance			
Fire service			
Police / civil defence / approved security			
Environmental regulator / spill support			
Battery manufacturer / specialist support			
Community emergency focal person			
SEA/SH specialised referral service - confidential			

J2. Drill record

Field	Entry
Scenario and objective	_____
Date / time / location	_____
Participants and external agencies	_____
Alarm and response times	_____
What worked well	_____
Gaps / unsafe conditions	_____
Corrective actions / owners / due dates	_____
Follow-up verification	_____

ANNEX K: TRAINING MATRIX AND INDUCTION REGISTER

K1. Minimum training matrix

Audience	Training / competence	Timing
All personnel	Project/site induction; Code of Conduct; hazards; emergency; GRMs; stop-work	Before access; refresher as needed
Managers/supervisors	ESHS responsibilities; incident management; non-retaliation; contractor control	Before mobilisation; annual/ refresher
Electrical authorised persons	Electrical safety; LOTO; switching; arc/shock; rescue; DisCo procedure	Before authorisation; periodic competence verification
Work-at-height personnel	Access equipment; fall protection; inspection; rescue	Before task; refresher/ verification
Excavation/lifting/hot-work/ confined-space teams	Task-specific PTW, controls and emergency response	Before task; refresher
Drivers/operators/riggers/ welders	Licence/skill verification; project rules; daily checks	Before assignment; periodic verification
HSE/first aid/emergency team	Inspections; incident investigation; first aid; fire/spill/rescue drills	Before role; certification/ refresher
CLO/GRC/HR	Stakeholder engagement; GRM; confidentiality; SEA/SH safe referral; child safeguarding	Before role; periodic refresher
Security personnel	Human rights; use-of-force limits; CoC; SEA/SH; community interaction; reporting	Before deployment; periodic refresher
O&M team	Electrical/BESS O&M; public safety; outage communication; environmental monitoring	Before handover; manufacturer refresher

K2. Induction register

Date	Name	Employer / role	Topics / language	Trainer	Assessment / signature

ANNEX L: GRIEVANCE AND DISCLOSURE CONTACTS

Channel	Contact / location / hours	Notes
Community GRM phone	_____	Calls/SMS; local language support
Community GRM email	_____	
Community grievance desk / box	_____	Accessible location; collection schedule
Worker GRM focal person	_____	Confidential; independent escalation
Worker GRM email/phone	_____	
SEA/SH confidential referral channel	_____	Do not publish survivor details
REA/DARES safeguards contact where provided	_____	
DisCo customer / emergency channel	_____	Outage/electrical danger
Emergency number	_____	24-hour where applicable

Minimum public disclosure

- Project description, schedule, site/route and expected disturbances.
- Land and livelihood process where applicable, including rights and grievance options.
- Local recruitment method and warning that no unauthorised fees or favours are required.
- Construction, traffic, outage, testing and energisation notices and safety precautions.
- Community GRM and emergency contacts; confidential SEA/SH pathway displayed in a safe manner.
- Tariff, metering, service and customer-protection information as approved for the project.

ANNEX M: CONTRACTOR ESHS DECLARATION

The undersigned contractor confirms that it has received, reviewed and understood the Promass DARES Interconnected Mini-grid Environmental, Social, Health and Safety Standards, the project ESMS, Code of Conduct and applicable site-specific instruments. The contractor agrees to implement all applicable requirements and flow them to subcontractors and labour providers.

Contractor commitment	Initial
Provide competent ESHS supervision, adequate resources and approved C-ESMP/method statements.	____
Ensure all workers have lawful terms, age verification, induction, PPE, welfare and worker GRM access.	____
Prohibit forced labour, harmful child labour, discrimination, SEA/SH, GBV, VAC, retaliation and bribery.	____
Implement PTW, electrical safety, LOTO, traffic, lifting, height, excavation, hot-work and emergency controls.	____
Protect communities, land, livelihoods, biodiversity, water, air, cultural heritage and property.	____
Segregate waste and maintain lawful battery/e-waste/hazardous-material chain of custody.	____
Report incidents and grievances promptly and cooperate with investigation, audit and corrective action.	____
Accept stop-work, payment withholding, personnel removal, suspension or termination for serious/repeated breach.	____

Contractor details	Entry
Legal name	_____
Registration / address	_____
Contract / work package	_____
Project Manager	_____
ESHS representative	_____
Authorised signatory	_____
Signature / date	_____

ANNEX N: MANAGEMENT APPROVAL AND ADOPTION

By signing below, Promass Engineering Services Limited adopts this document as the minimum ESHS standard for the proposed DARES Interconnected Mini-grid Project and authorises its issue for REA/DARES submission and project implementation, subject to completion of project-specific information and all required approvals.

Environmental and Social Manager	Project Director	Dr Sani Mohammed Bida, MD/CEO
Name / signature / date	Name / signature / date	Signature / date

Controlled distribution

Copy holder / organisation	Copy number / format	Date issued	Acknowledgement
REA/DARES safeguards team			
Promass project office			
EPC contractor			
DisCo project/interconnection team			
O&M team			

End of controlled document.