Invitation to Tender (ITT)

Location	**Wajaale, Somaliland**	PR NO	**026**
DATE	**January/ February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

The Wajaale Municipality, in conjunction with the Somaliland Government, invite bidders from eligible supply companies for the above-named project being implemented by the Wajaale Municipality.
It should be noted that contractors are automatically disqualified from participating in this tender if they assisted with any part of this project or tender process, including preparation of technical documents, or if they are related to a member of the Bid Committee without prior disclosure. Small businesses, minority-owned firms, and women's business enterprises are encouraged to apply.

The Mandatory criteria for bidders are as follows. FAILURE TO SUBMIT ANY OF THESE DOCUMENTS WILL LEAD TO AUTOMATIC DISQUALIFICATION:

a) Valid National certificate of registration (Bar Code matches with Certificate Information) from the Ministry of Trade and Tourism, Somaliland, Wajaale Municipality, and Permit Licence from The Ministry of Energy and Minerals, Somaliland.
b) Valid Tax Compliance Certificate (Bar Code matches with Certificate Information) from Ministry of Finance and Economic Development, Somaliland.
c) Filled, Signed, and Stamped Site Visit Certificate
d) Completely Filled out, Signed and Stamped Financial Bid. See Attachment M in the Bid Book
e) Filled and Signed Declaration Confirming the Absence of Any Conflict of Interest.

Other relevant submission requirements related to the evaluation criteria are:

f) Technical Proposal outlining understanding of the assignment, implementation methodology, and implementation plan.
g) List of previous relevant experience indicating company name, project name, company representative (name, telephone number & email), and evidence (contracts, signed recommendation letters and signed Completion/Successful letters)

A bidder is unlikely to be considered for award if they have more than one on-going project in **Wajaale**. A bidder is also unlikely to be considered for award if they have one on-going project in a location other than in **Wajaale** or within 5kms.

Submission (Physical & Electronically: Completed bid documents should be submitted in sealed envelopes addressed to: **The Bid Committee, Wajaale Solar PV System & BESS, 6 Buildings (PR 026)**

Bids are to be delivered to and received at the **Wajaale Municipality Office on or before 14 February 2026 at 4:00 pm.** Bidders are also required to submit their bids by email (sinaan.tender@dt-global.com) as two separate PDF files - Technical Proposal and Financial Proposal. Both files **MUST** be **password-protected**, with the passwords to be provided in person on the bid opening day at the Wajaale Municipality Office in Wajaale. Bids received after the deadline date and time will not be considered and shall be returned to the bidders unopened.

Offers are to remain valid for 180 days from the closing date of this tender. The Bid Committee reserves the right to vary the quantity of work/materials specified in the tender document without any change in unit price or other terms and conditions and to accept or reject any, all, or part of submitted offers.

Bid Opening: Bids will be opened at the **Wajaale Municipality office in Wajaale on 17 February 2026 at 9:00am** in the presence of the Bid Committee and applicants who wish to attend.

Evaluation Criteria: Offers will be evaluated by factors including, but not limited to, financial and technical criteria, record of past performance, integrity, and community rapport.

Women-owned construction companies are strongly encouraged to apply.

SINAAN Programme

Request for Proposals

Solicitation No.	**RFP # 026**
Title:	**Purchase, Supply & Installation of Solar PV System & BESS in 6 Buildings in Wajaale**
Issue Date:	**Sunday, January 25, 2026**
Closing Date:	**Saturday, February 14, 2026**
Questions Due:	**Wednesday, February 4, 2026**
Closing Time:	**1600 Hrs (4 pm) East African Time**
Subject:	**FCDO Contract No. 6215** **SINAAN Programme**

DT Global, the implementer of the SINAAN Programme under FCDO Contract No. **6215**, invites proposals for Purchase, Supply & Installation of Solar PV System & BESS in 6 Buildings in Wajaale as described in Attachment I "Statement of Work."

The period of performance for this activity anticipates commencing on February 2026 and ending November 2026. The issuance of a subcontract is subject to availability of funds, successful negotiation of the subcontract terms and budget, and reception of FCDO's Contracting Officer subcontract consent, if required. The Contract resulting from this award is envisioned to be a FIRM FIXED PRICE (FFP) CONTRACTUAL AGREEMENT.

DT Global encourages your organization to indicate its interest in this procurement by submitting a proposal in accordance with the instructions in Attachment II "Instructions to Offerors". Proposals will be evaluated based on the evaluation criteria established in Attachment III of this solicitation. An award will be made to the Offeror whose proposal represents the best value to the project after evaluation in accordance with the criteria stated in the solicitation.

To be considered under the solicitation process, the Offeror should submit a complete proposal by the means indicated herein no later than the closing date and time indicated above. Offerors should ensure that the proposals are well written, easy to read and follow, and contain only the requested information.

Proposals should be submitted in a **sealed envelops** to be delivered and received (fill out and sign register to confirm delivery) at the Wajaale Municipality Office on or before **14 February 2026; 1600 Hrs (East African Time)** and addressed to:

The Bid Committee, Wajaale Solar PV System & BESS (PR 026)

Bidders are also required to submit their bids by email as two separate PDF files - Technical Proposal and Financial Proposal. Both files **MUST** be **password-protected**, with the passwords to be provided in person on the bid opening day at the Wajaale Municipality Office in Wajaale.

The solicitation number above must also be mentioned in the subject of the email.

All questions relating to this solicitation must be submitted **electronically** via email to:

Procurement Team at sinaan.procurement@dt-global.com, no later than **February 4, 2026** at **1700 Hrs (5 pm)** East African Time. Unless otherwise notified by an amendment to this RFP, no questions will be accepted after this date. No questions/clarifications will be entertained if received by means other than the specified email address. The solicitation number should be

stated in the subject. If you are planning to submit a proposal, it is imperative to confirm receipt of this solicitation by email to sinaan.procurement@dt-global.com in order to be included on the solicitation mailing list to receive answers to questions and any future amendment(s).

Proposals must be submitted separately via two different documents. The first document shall include the technical proposal as an attachment and should be named “Technical Proposal – Name of Company” and the second documents shall include the cost/business proposal and should be named “Business Proposal – Name of Company.”

Attachments:

- Attachment I: Statement of Work
- Attachment II: Instructions to Offerors
- Attachment III: Evaluation Criteria
- Annex I: Bid Book
- Annex II: Filled and Signed Declaration Confirming the Absence of Any Conflict of Interest

Sincerely,

SINAAN Procurement Team

ATTACHMENT I

STATEMENT OF WORK

Provided in the Bid Book

ATTACHMENT II

INSTRUCTIONS TO OFFERORS

General Instructions

These Instructions to Offerors will not form part of the offer or of the Subcontract. They are intended solely to aid Offerors in the preparation of their proposals.

- The proposals, and all corresponding documents related to the proposal must be written in the English language unless otherwise explicitly allowed.
- No costs incurred by the Offerors in preparing and submitting the proposal are reimbursable by SINAAN Programme. All such costs will be at the Offeror's expense.
- Proposals and all cost and price figures must be presented in U.S. dollars. All prices should be net of all applicable taxes and duties.
- The Offeror must state in its Proposal the validity period of its offer. The minimum offer acceptance period for this RFP is **180 days** after closing date of the RFP. Offers with a shorter acceptance period will be rejected. This RFP in no way obligates DT Global to award a subcontract.
- Responsibility Determination: Award shall only be made to "responsible" prospective Offerors. To enable DT Global to make this determination, the Offeror must briefly describe in the Attachment Section of the proposal that it:

    - has adequate financial resources including appropriate insurance coverage to perform the work stated herein, or the ability to obtain them;
    - is able to comply with the required or proposed delivery or performance schedule, taking into consideration all existing commercial and governmental business commitments;
    - has a satisfactory performance record;
    - has a satisfactory record of integrity and business ethics;
    - has the necessary technical capacity, equipment and facilities, or the ability to obtain them; and
    - is otherwise qualified and eligible to receive an award under applicable laws and regulations.
- Taxes: SINAAN Programme is not exempt from cooperating country taxes, and duties. As such, all prices must be presented inclusive of any taxes, duties, and VAT. All fees or additional costs shall be disclosed in the Offeror's quotation. Any fees, costs, taxes, or other demand of funds not disclosed in the offeror's quotation will not be considered for payment.
- Eligibility: By submitting an offer in response to this RFP, the offeror certifies that it and its principal officers are not debarred, suspended, or otherwise considered ineligible for an award by the UK Government. DT Global will not award a contract to any firm that is debarred, suspended, or considered to be ineligible by the U.S. Government.
- Late Offers: Offerors are wholly responsible for ensuring that their offers are received in accordance with the instructions stated herein. SINAAN Programme reserves the right to reject any offer not submitted by the indicated deadline, even if it was late as a result of circumstances beyond the Offeror's control.
- Modification/Withdrawal of Offers: Offerors have the right to withdraw, modify or correct their offer after such time as it has been emailed to SINAAN at the email addresses stated above and provided that the request is made before the RFP closing date.
- Disposition of Proposals: Proposals submitted in response to this RFP will not be returned. Reasonable efforts will be made to ensure confidentiality of both Cost and Technical Proposals received from all Offerors. This RFP does not seek information of

a highly proprietary nature but if such information is included in the Offeror's proposal, the Offeror must alert SINAAN Programme and must annotate the material by marking it "Confidential and Proprietary" so that these sections can be treated appropriately.

- Regardless of the method used in the submission of the proposal, the Technical Proposal and Cost Proposal must be kept separate from each other. Technical Proposals **must not** make reference to cost or pricing data in order that the technical evaluation may be made strictly on the basis of technical merit.
- Clarification and Amendment to the RFP:
    - Any question raised regarding this solicitation should be received no later than 1700 Hrs (5 pm) East Africa Time (EAT) on **Wednesday, February 4, 2026**. All questions must be **in writing,** emailed to the email addresses specified in the cover letter. No questions/clarifications will be entertained if they are received by means other than the aforementioned email addresses. The solicitation number should be stated in the subject line. Responses to questions received will be compiled and emailed to potential Offerors.
- If Offeror intends to submit a proposal in response to this solicitation and wishes to receive any updates thereto, Offeror is encouraged to confirm receipt of this solicitation by email to the email address specified in the cover memo.
- Offeror's email message should state in the subject the solicitation number. Also, the email should include the name of your organization, the name of contact person, email address and telephone number.
- SINAAN Programme anticipates that discussions with Offerors will be conducted following vendor Technical and Cost Proposal submission; however, SINAAN Programme reserves the right to make award without discussions. Therefore, it is strongly recommended that Offerors present their best offer as their initial Technical and Cost proposal submission.
- SINAAN Programme may waive informalities and minor irregularities in proposals received.

Submission of Proposal:

- Proposals must be submitted in an electronic format as an email attachment, sent to the email address specified in the cover letter, no later than the date and time specified in the cover letter.
- The email should state the solicitation number in the subject line as well as title.
- The file attachment should be in a format that can be opened by one of the following applications: PDF, MSWord, MSExcel, MSPowerPoint.or ZIP. The submission of attachments in any other format may result in disqualifying the offer.
- Please note that the DT Global email server has a limitation of 20MB for the total attachments per single email. It is strongly recommended that the size of ALL attachments per a single email be less than 20MB.
- The technical proposal and business proposals should be submitted in two separate documents. The first should be named "Technical" and the second is named "Cost/Business." If the submission will be through several emails, then the emails should be sequentially numbered indicating the total number of emails that will be submitted (example 1/4, 2/4, 3/4 and 4/4).

Content of Proposal:

The proposal shall consist of five (5) sections. 1) The Cover Page-Technical, 2) The Technical Proposal, 3) The Cover Page-Cost, 4) the Cost/Business Proposal; and 5) The Attachments

1. ***The Cover Page-Technical:***

The cover page should be on the Offeror's letterhead and MUST contain the following information:

- Solicitation Number
- Company's Name:
- Company's Address
- Name of Company's authorized representative
- Telephone No, Cellular Phone #, Email address
- Validity of Proposal
- Signature, Date and time

Below is the template to be filled, signed and submitted together with the proposal:

Proposal Cover Letter

[On Firm's Letterhead]

<Insert date>

TO: DT GLOBAL- SINAAN Programme

We, the undersigned, provide the attached proposal in accordance with **RFP PR 004 Purchase, Supply & Installation of Solar PV System & BESS in 6 Buildings in Wajaale** issued on January 25, 2026. Our attached quoted proposal has fixed prices.

I certify that our proposal is valid for a period of **180** days. Upon award, our proposal price shall be binding upon us, subject to the modifications resulting from any discussions and final negotiations. I certify our financial responsibility as well as have the ability to pre-finance.

We understand that SINAAN Programme is not bound to accept any proposal it receives.

Yours sincerely,

Signature

Name of Authorized Representative
Title of Authorized Representative
Company Seal/Stamp

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2. Technical Proposal:

The technical proposal shall describe how the Offeror intends to carry out the statement of work. It will also address the Offeror's corporate capabilities to carry out the work and the extent to which the Offeror has a demonstrated ability to provide the required services.

The Offeror will also include the resumes of all proposed personnel. The Offeror shall provide information about past performance implementing similar work globally, and most particularly, in Somaliland within the last 3 years. Capacity to undertake the technical and administrative backstopping of all interventions described in the Scope of Work. Offeror should also provide detailed description of existing goods and services in Somaliland.

The technical proposal should be divided into three sections following the same order of the technical evaluation criteria mentioned in Attachment III. Failure to respond to any section will be the basis for disqualification of the Offeror from further consideration.

3. The Cover Page - Cost/Business:

The cover page should be on the Offeror's letterhead and MUST contain the following information:

- Solicitation Number
- Company's Name:
- Company's Address
- Name of Company's authorized representative
- Telephone No, Cellular Phone #, Email address
- Total Proposed Price
- Validity of Proposal
- Acceptance of Tax Withholding Statement
- Name and address of Government Audit Agency and name and phone number of the auditor
- A valid Business License or National Registration Certificate (with Readable QR Code)
- A valid Tax Compliance Certificate (with Readable QR Code)
- Signature, Date and Time

4. The Cost Proposal/BOQ:

As stated earlier, the cost proposal/BOQ shall be submitted separately from the technical proposal. The budget will present the cost for performing the work specified in this solicitation. A template is provided for the pricing in the Bid Book (Annex I). At a minimum, the cost proposal will include the following information:

- A detailed cost break-down of the proposed budget to the maximum extent practical including using the template provided.
- A detailed and comprehensive budget narrative explaining the basis for the cost estimates.
- Copy of a valid business license or National Registration Certificate from Ministry of Trade and Tourism, Somaliland, Wajaale Municipality, and Permit Licence from The Ministry of Energy and Minerals, Somaliland.
- Copy of a valid Tax Compliance Certificate (Bar Code matches with Certificate Information) from Ministry of Finance and Economic Development, Somaliland
- Completely Filled out, Signed and Stamped Financial Bid.
- Filled and Signed Declaration Confirming the Absence of Any Conflict of Interest.

- If Offeror does not have a cognizant audit agency, the Offeror must provide audited balance sheets and profit & loss statements for the last two complete years and current year-to-date; and
- The most recent two fiscal year pool and base cost compositions along with derived rates, the bases of allocation of these rates and an independent certified audit by a certified accounting firm of these rates.

Please refer to Bid Book – Attachment M for a budget template for the cost proposal.

5. Attachments

This section will include any information or document that was not listed in the above sections and the Offeror finds necessary to include in the proposal. In this section, the Offeror will also include the information that will assist SINAAN PROGRAMME to determine the Offeror's responsibility. The following are **mandatory** required documents to be submitted with the proposal:

- Valid certificate of National registration (Bar Code matches with Certificate Information) from the Ministry of Trade and Tourism, Somaliland, Wajaale Municipality, and Permit Licence from The Ministry of Energy and Minerals, Somaliland.
- Valid Tax Compliance Certificate (Bar Code Filled and Signed Bid Book
- Completely Filled out, Signed and Stamped Site Visit Certificate
- Completely Filled out, Signed and Stamped Financial Bid.
- Signed Certificate of attendance of Bidder's Site Visit by Wajaale Mayor and SINAAN City Coordinator (vendor is also required to sign the Bidder's Site Visit Registration Form at the Wajaale Municipality Office)

This solicitation in no way obligates DT Global to award a subcontract, nor does it commit DT Global to pay any costs incurred in preparation and submission of a proposal in response to the RFP. Furthermore, DT Global reserves the right to reject any and all offers if such action is in the best interest of DT Global.

Instructions for the Preparation of the Cost/Business Proposal

The subcontract type will be FIRM FIXED PRICED (FFP) CONTRACTUAL AGREEMENT.

A Firm Fixed Price Subcontract is: An award for the provision of specific services, goods, or deliverables and is not adjusted if the actual costs are higher or lower than the fixed price amount. Offerors are expected to include all costs, direct and indirect, into their total proposed price.

The Offeror must provide a completed budget in the template provided. If an Excel file, it should NOT be 'read only' or 'protected' The proposal must include any necessary supporting information to substantiate proposed costs. The Offerors must submit a detailed budget narrative that supports and clarifies item for item the cost estimates proposed in its budget. Narratives for the individual cost items must provide a discussion of any estimated escalation rates where applicable. Estimated costs proposed to exceed ceilings imposed by FCDO or FCDO procurement policy must be fully explained and justified.

ATTACHMENT III

EVALUATION CRITERIA

Provided in the Bid Book

ANNEX I

DECLARATION CONFIRMING THE ABSENCE OF ANY CONFLICT OF INTEREST

Subject: DECLARATION CONFIRMING THE ABSENCE OF ANY CONFLICT OF INTEREST

Ref: PR 026 – Purchase, Supply & Installation of Solar PV System & BESS in 6 Buildings in Wajaale (PR 026)

We, as authorized representative of_____ (**Insert Company Name Here, and Fill out and sign table below)** certify that:

- I do not have any material, personal or financial relationship with **SINAAN Programme/ WAJAALE MUNICIPALITY**, or to its employees;
- I will uphold the integrity and impartiality of this procurement process in sprit and in fact;
- I will not engage in any corrupt practice during the procurement process i.e. solicit or accept, either directly or indirectly any gift, favour, loan, kickback, payment, commission or any other thing of monetary value from a potential or actual bidder;
- I will not engage in fraudulent practice (misrepresentation or omission of facts in order to influence a procurement process;
- I will immediately notify the **SINAAN Programme** of any attempt to influence me.

Signed:

NAME	ORGANIZATION	TITLE	SIGNATURE

ANNEX II:

BID BOOK

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

BID BOOK

Summary of Bid Documentation

Attachment #	Instructions to Bidders	Attached or Filled, Stamped & Signed Checklist
A	Form of Bid	☐
B	Certification to Additional Agreements as Part of the Bid	☐
C	Company Registration	☐
D	Certificate of Bidders Visit	☐
E	Certificates of Compliance to FCDO Regulations	☐
F	Summary of Past Performance, Experience & Technical Capability	☐
G	Key Site Staff (CV and Certificates Must be attached)	☐
H	List of Equipment	☐
I	Value of the works currently under contract (On-going Works)	☐
J	List of Local Laborers	☐
K	Methodology and Works Schedule	☐
L	Bank Details for Payments	☐
M	Cost Proposal - Bills of Quantities (to be filled)	☐

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

Instructions to Bidders

Scope of Bid SINAAN PROGRAMME invites qualified construction contractors to submit a best-price proposal for this work funded by the UK Government as described in this Bid document. Offerors are responsible for ensuring that their proposals are received by SINAAN PROGRAMME in accordance with the instructions, terms, and conditions described in this RFP. Failure to adhere with instructions described in this RFP may lead to disqualification of a proposal and offeror from consideration.

Source of Funds The Works are carried out under the SINAAN PROGRAMME program.

Eligible Bidders The main criteria for admission to the tender are as follows:

a) Valid certificate of registration (Bar Code matches with Certificate Information) from the Ministry of Trade and Tourism, Somaliland, Ministry of Energy and Minerals, Somaliland, and Wajaale Municipality.
b) Valid Tax Compliance Certificate (Bar Code matches with Certificate Information) from Ministry of Finance and Economic Development, Somaliland.
c) Bidders that comply with the applicable UK Government/ FCDO certifications.
d) Signed technical submission form and financial proposal
e) Completed, filled and signed BOQ
f) Filled, Signed and Stamped Site Visit Certificate.
g) Provide a company profile with a list of names of directors
h) CVs of company's Key staff personnel (written into the bid book is acceptable)
i) Must have a minimum of 5 years of experience as a solar installation company in Somaliland.
j) Adequate Equipment
k) Good track-record and references from previous clients
l) A company bank account

Ineligible to participate in the bidding process are:

m) Offerors (including all subcontractors which will be engaged) must not currently be associated with or have been associated with (or the affiliates of a business or company) the consultants or company which developed the specifications, plans, measurements, and other documents used in previous RFPs or as part of this RFP.
n) Offerors who are bankrupt or insolvent as determined by a judicial decision other than bankruptcy, resulting, in accordance with the applicable legislation, in total or partial seizure by the Administration and disposition of its property;
o) Offerors who are seriously guilty of false statements regarding information required for its participation in a Request for Quotations or a RFP;
p) Offerors who have not substantiated being in compliance with the Tax and Labor Administration;
q) Offerors who are related to a person employed by DT Global or the SINAAN PROGRAMME, or who is related to a person having a relationship with a person employed by DT Global or the SINAAN PROGRAMME program.
r) Offerors who have connections with terrorist organizations or who finance acts of terrorism.

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

One Bid per Bidder	A firm shall submit only one bid in the same bidding process, either individually as a bidder or as a partner in a joint venture. No firm can be a subcontractor while submitting a bid individually or as a partner of a joint venture in the same bidding process. A bidder who submits or participates in more than one bid will cause all the proposals in which the bidder has participated to be disqualified.
Cost of Bidding	The bidder shall bear all costs associated with the preparation and submission of its Bid. SINAAN PROGRAMME and the Bid Committee will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. No fees may be charged for the collection of a bid book.
Site Visit (Mandatory)	The bidder is advised to visit and examine the Site of Works and its surroundings and obtain, as their own responsibility, all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the site shall be at the bidder's own expense. Bidder is expected to provide a signed and stamped site visit form by the Wajaale Mayor. There is no cost to be incurred for the signature of the site visit form.
Language of Bid	The Language of Bid shall be in English ONLY.
Annexes Incorporated by Reference	The bidder is responsible of becoming familiar with Annex 1 (Quality Assurance Plan to be followed during construction)
Packaging and Marking of Proposal	Bid documents are to be delivered to and received at the **Wajaale Mayor's Office** on or before 14 **February 2026 at 4:00 pm.** Bids received after this time will not be considered and shall be returned to the bidders unopened

RFP# -027

Purchase, Supply and Installation of Solar PV System & BESS for 6 Buildings in Wajaale

DUE: February 14, 2026, 1600 Hrs (East African Time)

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

Documents included in the Bid

The Bidder shall fill all the information requested in the Bidding Documents. The documents to be included in the bid are:

The Following describes the contents of the Technical Proposal:

Attachment A - Form of Bid
Attachment B - Certification to Additional Agreements as Part of the Bid
Attachment C - Company Registration
Attachment D - Certificate of Bidder's Site Visit
Attachment E - Certificates of Compliance to FCDO Regulations
Attachment F - Summary of Past Performance, Experience & Technical Capability
Attachment G - Key Site Staff (CV and Certificates Must be attached)
Attachment H - List of Equipment
Attachment I - Value of the works currently under contract (On-going Works)
Attachment J - List of Local Laborers
Attachment K - Methodology and Work Schedule (To be submitted)
Attachment L - Bank Details for Payments (Vendor Payment Information Form (to be Filled, stamped and signed)
Attachment M – Cost Proposal – Certificate of BOQ Quantities and Bills of Quantities (to be Filled, stamped and signed)

Bid Prices

Bidders are responsible for checking the accuracy of the BOQ. If significant deficiencies are identified, the bidder should reflect those discrepancies in the BOQ **as a separate line item and should bring to the attention to the evaluating committee with a foot note**. The Contract shall be for the whole Works computed based on the unit rates and prices in the Bill of Quantities submitted by the bidder. The bidder shall fill in prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the bidder will not be paid for when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities.

Currency of the Bid and Payments

The currency of the Bid and payment for works executed shall be in United States Dollars (USD).

Filling and Signing of the Bid

The bidder shall fill all the information requested in the bid documents. If additional pages are required, the same can be inserted and paged accordingly. All the information shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the bidder.

All pages of the bid where entries or amendments have been made shall be initialed by the person or persons signing the bid.

Bid Validity

The Bid shall remain valid for a period of 180 days from the date of this tender. Bidders may not alter their bids after submission.

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

Evaluation of Bids

The Evaluation Committee will have the responsibility to review, evaluate and qualify each of the criteria of all the offers received. As a result of the evaluation, the Evaluation Committee will jointly recommend the Offeror to be awarded the contract/contracts.

Please note that if there are significant deficiencies regarding responsiveness to the requirements of this RFP, a proposal may be deemed "non-responsive" and thereby disqualified from consideration.

Mandatory Documents

Compliance of Mandatory Documents: The committee will check the presentation of the mandatory documents and certifications. DT Global reserves the right to waive immaterial deficiencies at its discretion.

List of Mandatory Documents	Indicate (Yes/No)
Attachment A- Form of Bid	
Attachment B- Certification to Additional Agreements as Part of the Bid	
Attachment C- Company Registration	
Attachment D- Certificates of Compliance to FCDO Regulations	
Signed technical submission form and financial proposal	
Completed and filled and signed BOQ	

TECHNICAL EVALUATION: The offers will first be evaluated on technical merits. The technical evaluation assesses the capacity of the company on the basis of submitted technical documents. Points will be allocated to a maximum indicated in the table below. If a company gains less than 70 points (out of 100), it will not be taken into consideration for financial evaluation.

S-1 Methodology and Work Schedule (20 points)

The Offeror should prepare a work schedule in which shall describe a detail breakdown of activities that will allow supervision to monitor weekly progress as well as should proposed a payment schedule base on progress for each BOQ line item. The schedule should include breakdown by procurement, mobilization to project site (including materials delivery and project office and housing for workers), all solar installation activities (excavation, demolition, floors, walls, ring beam, ceiling, finishing, water supply and distribution system, electrical supply and distribution system, and landscaping) and the duration for each activity with a planned start and end date.

S-2 Past Performance and Reference List (30 points, 5 points for each valid project, and 5 points for Local Credibility)

- Projects identified should be of a type similar nature such as Supply and Installation of Solar Street Lights and PV systems, government and commercial buildings, schools, community buildings, international or non-governmental organization offices or compounds, health units or clinics, etc.
- Offerors must provide the location and contact details, phone number and email addresses, for any project listed. SINAAN PROGRAMME reserves the right to visit any site for inspection to evaluate an Offeror's technical capability.
- The Offeror is required to distinguish, between works performed as the prime contractor or subcontractor; monetary values should be based on the portion of the project performed, i.e., works performed as a subcontractor should only include the monetary amount of the subcontract and not the prime contract.
- Projects identified should be of a monetary value equal to or greater than the magnitude for this RFP; less weight will be given for projects identified that are lower than the estimated value of this RFP.
- Recently completed (past 6 months) or current works will be given greater consideration than older projects, and completed projects greater consideration than current projects. References for projects completed must be submitted on client letterhead to be considered valid.

S-3 Key Personnel and Subcontractors (20 points to be divided among requested key personnel)

The Offeror should describe the proposed technical and managerial team and attach copies of the CVs for the following key personnel (to be changed according to each project) :

- Company Director
- Top Technical Position: Civil/Electrical/Project Engineer – at least bachelor's degree in civil or electrical engineering or equivalent with minimum 7 years of experience. The presence of the Civil/Electrical Engineer will be required on site at a minimum twice per month.
- Onsite Electrical/Solar energy engineer with minimum experience of 5 years to be present at the installation stage of the solar lights
- On-Site Supervisor – Diploma or equivalent in civil engineering and/or minimum civil engineering technician background, with 5 years of experience in general civil engineering with excellent hands-on civil engineering skills Electrical technician – Diploma or equivalent in Electrical with minimum 5 years of experience

and any other key personnel proposed by the Offeror. If one individual fills more than one of these roles, please state this in the proposal. Identifying an individual in the staffing plan and not utilizing them in that capacity during the performance of the works may be grounds for Termination for Default of any contract resulting from this RFP.

S-4 Number of Laborers (10 points)

The contractor should list the number of labours to be used during implementation. The recruitment and employment of local unskilled labour is highly encouraged. The points will be awarded based on the percentage of women labourers and the roles given to women on the project as well as labourers' qualifications as outlined in their CVs and Certificates.

S-5 List of Equipment (20 points)

It is anticipated that significant equipment, tools and material are required for proper completion for the Purchase, Supply and Installation of Solar PV System & BESS in 6 Buildings in Wajaale. The contractor will provide a list of the equipment using Attachment G and confirm the availability, as well as the make and model (brand), year of manufacture, indicate if it is in proper functioning condition, as well as ownership (or rental) of each required piece of equipment.

The Offeror should also include information where all materials will be sourced and how it will be delivered to the project site, including specific borrow location for sand and aggregate materials, or clearly indicate that you do not have this information. Equipment used by the Offeror not listed in Annex 4 must be clearly marked and a detailed description/justification for their use should be provided. Failure to complete all blanks on this document may reflect negatively on an Offeror's proposal during the technical evaluation.

Schedule	Category		
	Technical	**Max Points**	**Points**
S1	**Methodology and Work Schedule**	**20**	**0**
	Offeror demonstrates an understanding of the activities to be undertaken, the order in which they should occur and timeline by which they should be completed, through the submission of a Methodology and Work Schedule (Methodology 10 points; Work Schedule 10 points)		
S2	**Past Performance and Reference List**	**30**	**0**
	Offeror will be evaluated on quality of completed projects which are similar. Offeror should list at least five (5) current or previous contracts/projects references undertaken in the region (Somaliland), particularly of a similar nature to the works in contained in the RFP. (5 points for each project); Local Credibility (5 points)		
S3	**List of Key Personnel**	**20**	**0**
	Offeror's proposed technical and managerial staff has skills, education and experience necessary to complete the project. Points are awarded on the basis of the presentation of CVs signed and dated by key personnel, copies of diplomas, letters of commitment, and description of personnel allocation.		
S4	**Number of Laborers**	**10**	**0**
	Percentage of women laborers and the approach to use of women in the project with their Qualification –CV & Certificates	5	
	Number of local semi-skilled and skilled labors proposed for the project - list skills and level of effort needed	5	

S4	List of Equipment	20	0
	Evaluation of the type, capacity, quantities, proof of availability, age and location of relevant equipment that the Offeror can use for the work.		
	TOTAL MARKS	**100**	

Once the Evaluation Committee has finished evaluating the technical proposal, it will proceed to evaluate the cost proposal (financial evaluation for those offers that present the best qualifications and reached a minimum score of **70 points**). Proposals that do not reach the minimum score will be disqualified and will not be considered for further evaluation.

Financial Evaluation: The evaluating committee will proceed to evaluate the reasonableness of the cost proposal. Each individual line item will be compared to the official estimate. Those line items that are considered to be high will be identified for further negotiation. The evaluating committee will proceed to request:

a) A breakdown of the cost
b) Best negotiated and final offer for those line items

The best and final will be reviewed for reasonability, the evaluating committee has the right and discretion to eliminate:

a) Those proposals that after negotiating are still considered to be unreasonable when compared to the official estimate
b) Those proposals that are 10% above or below the official estimate. (Evaluating Committee will not apply the 10% above criteria when BOQ failed to identify critical and necessary line items).

The passing technical bids shall be checked for any arithmetic errors and corrections made as follows:

a) Where there is a discrepancy between the amounts in figures and words, the amount in words will govern;
b) Where there is a discrepancy between the unit rate and the line item total derived from multiplying the unit rate by the quantity, the unit rate as quoted will govern unless in the opinion of the Bid Committee, there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected;

<u>If a bidder refuses to accept the correction, their bid may or will be rejected</u>.

Award

The Bid Committee will recommend a bidder whose bid has been determined to:

a) Be substantially responsive to the bidding documents.
b) Receives at least 70 points in the technical evaluation
c) Presents the **<u>best value</u>** to the program

SINAAN PROGRAMME shall then notify the successful bidder in writing that their Bid has been accepted before the expiry of the period of Bid validity. The Letter of Acceptance sent to the Contractor shall state the sum payable to the Contractor for execution, completion and maintenance of Works as per the Bid.

The Evaluation Committee will also propose as second and third alternatives, the offers that they occupy the second and third place in descending order.

SINAAN PROGRAMME shall then send the Subcontract Agreement to be signed by the selected Contractor. The Contractor should return the signed Contract Agreement within seven days of receiving the Contract.

The contractor attests to their ability to mobilize on site with all specified equipment within Ten days of award and subsequent contract signing.

SINAAN PROGRAMME reserves the right to conduct any of the following:

- May conduct cost negotiations with offerors' and (request best and final) and/or request clarifications from any offeror prior to award.
- While preference will be given to offerors who can address the full technical requirements of this RFP, SINAAN PROGRAMME may issue a partial award or split the award among various offerors, if in the best interest of the program.
- SINAAN PROGRAMME may cancel this RFP at any time.
- SINAAN PROGRAMME may reject any and all offers, if such action is considered to be in the best interest of SINAAN PROGRAMME, or FCDO

SINAAN PROGRAMME reserves the right not to notify bidders if their offers were unsuccessful.

Modifications to the Contract

This is a fixed price Subcontract Agreement that can only be modified for the following reasons:

a) When additional scope has been identified that was not contemplated in the original SOW and BOQ as necessary, modifications cannot exceed 15% of the contract value. Line items cost will be used as a base to calculate value of modification. It can only be modified by written instrument signed by both parties. The parties' right to modify or amend this Subcontract may be subject to approval by FCDO.

b) DT Global may make adjustment for substitution of works that do not affect the total value of the contract. Only those changes in the works that are approved on a written change order by the Team Leader, shall be binding on the Contractor within the general scope of the Contract.

Performance outside Scope of Subcontract

The Subcontractor shall receive technical direction from the SINAAN PROGRAMME Team Lead (TL) or SINAAN PROGRAMME Deputy Team Lead (DTL) or the SINAAN PROGRAMME Chief Engineer as authorized in writing. In no event shall any direction from SINAAN PROGRAMME (other than a formal, written Modification issued by the TL or the Contract Manager) increase the Not-to-Exceed cost of this Agreement. Contractor shall not be compensated or reimbursed by SINAAN PROGRAMME for services performed or materials provided beyond those required to carry out the works.

Termination

SINAAN PROGRAMME shall have the right to terminate this Agreement at any time for any reasons provided all accepted materials and services completed prior to the termination notification have been paid to the Contractor.

SINAAN PROGRAMME shall also be entitled to terminate this Contract upon the occurrence of any of the following:

- Termination of the Prime Contract between SINAAN PROGRAMME and FCDO for any reason whatsoever.
- Termination of funding for the Project for any reason whatsoever.
- Failure by Contractor to make immediate progress toward the cure of a default or cure the default under this Contract within 10 days after written notice from SINAAN PROGRAMME. Grounds for default include, but are not limited to: (1) failure by Contractor to strictly adhere to the delivery schedule defined in the Statement of Work; and (2) any other material violation of this Contract.

SINAAN PROGRAMME has to terminate this Agreement will provide ten (10) days prior written notice provided all outstanding debts have been paid for services satisfactorily performed. In the event either Party elects to terminate this Agreement for cause, they shall provide the other with written notice specifying the failure and a minimum period of ten (10) days in which to cure the failure. If reasonable progress towards satisfactory performance of the failed services is not made before expiration of the cure period, a notice of termination for cause may be issued.

Subcontractor shall be reimbursed for Services performed under this Agreement satisfactorily performed up to notice of termination date. If Agreement is terminated for cause, Subcontractor shall not be reimbursed for any work not properly performed under this Agreement.

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Mandatory Documents to be included in the Bid Package

Attachment A - Form of Bid

To, The Bid Committee:

1. Having visited the above project site and examined the required bidding documents for the above mentioned works, we offer to execute, complete and remedy any defects to the works therein for the sum of (Insert amount in figures) USD$_____ (insert amount in words) _____.

2. We undertake, if our bid is accepted, to mobilize on site with all respective equipment required to facilitate works and to begin said work within _____ calendar days of signing the official contract. We hereby further agree to complete and deliver the works in accordance with the contract within _____ calendar months calculated from the date of starting the works. Failure to maintain the approved timeline for delivery and schedule of works may result in the assessment of liquidated damages and possibly termination of the contract for cause. We understand and agree that DT Global and its SINAAN PROGRAMME representatives are not responsible to help facilitate transport of equipment into areas of designated works.

3. We understand and we accept that the Committee is not bound to choose the lowest price or any bid that may be received and that any or all bids may be rejected without assigning any reason for such rejection.

4. The validity of bids period is 180 days from the date of review and we agree to abide by this from the date fixed for receipt of the same.

5. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

Dated (day) _____ Day of (month)_____ (Year) 20_____

Signature_____ in the capacity of (Title) _____

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Attachment B - Certification to Additional Agreements as Part of the Bid

Type of Contract to be Awarded	Fixed Price
Defects Liability Period	One Hundred and Eighty (180) Days
Defects Liability Warranty Bond	10 % to be presented at the end of the contract. If warranty bond will not be presented DT Global will hold the retention payment till the successful completion of Defect and Liability period.
Percentage of Retention	10% of Interim Payment Certificate (To be released upon presentation of Warranty Bond)
Time Allotted for Payment(s) once Payment Certificate is Approved	Forty Five (45) Days from Receipt of Official Invoice
Local labor to be hired under the contract	50%
Percentage of Women to be Hired Under the Contract	Minimum of 5%
Late delivery; Liquidated Damages	a) In the first 15 calendar days of delay, the amount of the daily penalty fine will be (0.05%) of the total pending contract value at the time the fine is imposed. b) In the next 15 calendar days of delay, the amount of the daily penalty fine will be (0.10%) of the total pending Contract value at the time the fine is imposed. c) The following calendar days of delay, the amount of the daily penalty fine will be (0.15%) of the total Contract value at the time the fine is imposed. When the total value of the accumulated fine amounts percent (15%) of the total Contract value, DT Global shall cancel the Contract.
Project Cancelation	Contract will be terminated for cause if contractor defaults on agreement and will occur once all liquidated damages have been assessed and collected/deducted accordingly.
Contract Duration	_____ Months

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Terms and Conditions of Award

The subcontract award will include, but not be limited to, the following provisions:

TYPE OF SUBCONTRACT

This is a Fixed Price subcontract. This fixed price includes, but is not necessarily limited to, all of the Subcontractor's labor, supervision, insurance, transportation, fuel, oil, materials, tools, equipment, transport, loading and offloading, handling, maintenance, testing, taxes, quality control, security, waste removal and other obligations to which the Subcontractor may be entitled as well as the entire and indirect costs, such as overhead, transportation, and profit. Payments to contractor cannot exceed the total contract award

The subcontractor agrees that shall bear the financial responsibility for any fines, fees, penalties, or corrective costs that result as a consequence of the subcontractor's failure to meet the local environmental city regulations concerning demolition and disposal in a manner consistent with the terms of this subcontract.

Any fines, fees, penalties, or corrective costs that are not paid by the Subcontractor directly, shall be deducted from the final contract value.

LIQUIDATED DAMAGES

Contractor shall adhere to the delivery schedule set forth in the contract. When the Contractor is delinquent in fulfilling its contractual obligations, DT Global, may terminate the contract or impose a fine for each calendar day of delay, in accordance with the following table:

a) In the first 15 calendar days of delay, the amount of the daily penalty fine will be (0.05%) of the total pending Contract value at the time, the fine is imposed.
b) In the next 15 calendar days of delay, the amount of the daily penalty fine will be (0.10%) of the total pending Contract value at the time, the fine is imposed.
c) The following calendar days of delay, the amount of the daily penalty fine will be (0.15%) of the total Contract value at the time, the fine is imposed.

When the total value of the accumulated fine amounts to fifteen percent (15%) of the total Contract value, DT Global shall cancel the Contract. The percentage of the fine previously established, shall apply to the total Contract value on the date the fine is imposed. The above penalties shall be determined and imposed following a meeting with the Contractor. The Contractor will be notified in writing of the meeting. Failure to attend the meeting will result in a forfeiture of any rights to discuss, contest, or negotiate the imposition of fines. DT Global's supervisory firm in the field will report indicating lack of satisfactory completion beyond the agreed and signed Delivery Schedule,

Unless the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor the fine will not be applicable. Examples of such causes include Acts of God or the public enemy, acts of the government in either its sovereign or contractual capacity, fires, epidemics, quarantine restrictions, security strikes, unusually severe weather or delays of Contractor at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both DT Global and the Contractors.

Signature of Bidder: _____ Date _____

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Attachment C - Company Registration

Valid certificate of registration (Bar Code matches with Certificate Information) from the Ministry of Trade and Tourism, Somaliland, Wajaale Municipality, and Permit Licence from The Ministry of Energy and Minerals, Somaliland – a copy to be attached to the bid documents

Name of Business or Firm: _____

Place of registration: _____

Exact Address: _____

Telephone: _____

Mobile: _____

Email: _____

Validity Date: _____

Principal Place of Business: _____

Name of Director: _____

Provide original or certified copy of all mandatory administrative documents: All valid registered Businesses located or represented in the region from the Ministry of Trade and Tourism, Somaliland, Wajaale Municipality, and Permit Licence from The Ministry of Energy and Minerals, Somaliland; and valid Tax Compliance Certificate from Ministry of Finance and Economic Development, Somaliland.

I do hereby certify that the **information** contained herein is **accurate**. I authorize DT Global to verify, as the need arises, the accuracy of this information, either through on-site visits to my place of business, or by inquiries through relevant and competent services.

Signed on (Date)_____ Name: _____

_____ Title: _____

Signature of authorized agent

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Attachment D- Certificate of attendance of Bidders site meeting signed and stamped by Wajaale Mayor/Municipality.

Certificate of Bidder's Visit to Site

This is to certify that

(Name/s): _____

Being the authorized representative(s) of (Name of Bidder): _____

Name of Organization: _____

Participated in the organized visit to the works site for the above-named project, held on

_____ (date)

Signed & Stamped: _____
Mayor, Wajaale Municipality

Signed: _____
City Coordinator, Wajaale, SINAAN

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Attachment E- Certificate of Compliance to FCDO Regulations

Certification Regarding Knowledge of FCDO Compliance

To: Team Leader, SINAAN PROGRAMME

I, _____ (FIRST NAME, LAST NAME), as _____

(TITLE), a legally Authorized representative of _____ (ORGANIZATION NAME) do hereby certify that, by signing below, we provide certification and assurance for the following:

(1) Organizational Conflicts of Interest Representation
(2) Disclosure of Ownership or Control by Government of a Terrorist Country
(3) Key Individual Certification Narcotics Offenses and Drug Trafficking
(4) The Sexual Abuse and Exploitation in Transition Assistance Operations

These certifications and assurances are given in consideration of and for the purpose of obtaining any and all UK Government/ FCDO grants, loans, contracts, property, discounts, or other UK Government/ FCDO financial assistance extended after the date hereof to the Sub-contractor by DT Global, including installment payments after such date on account of applications for UK Government/ FCDO financial assistance which was approved before such date. The Sub-contractor recognizes and agrees that such UK Government/ FCDO financial assistance will be extended in reliance on the representations and Subcontracts made in these assurances, and that the United States will have the right to seek judicial enforcement of these assurances. These assurances are binding on the Sub-contractor, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign these assurances on behalf of the Sub-contractor.

I, we, understand that a false, or intentionally misleading, certification could be the cause for possible actions ranging from being found not responsible for this award to suspension or debarment of this organization in accordance with the provisions of FCDO Regulations.

I declare under penalty of perjury that the foregoing is true and correct.

Signature: _____

Date: _____

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ORGANIZATIONAL CONFLICTS OF INTEREST REPRESENTATION

1. (a) The **Contractor** represents that, to the best of its knowledge and belief, the award of this Subcontract or the modification of an existing contract does ☐ or does not ☐ (tick where appropriate) involve an organizational conflict of interest.

(b) The term "organizational conflict of interest" means that a relationship exists whereby a Contractor or Subcontractor (including its chief executives, directors, proposed Subcontractor or Subcontractors) has interest which (A) may diminish its capacity to give impartial, technically sound, objective assistance and advice or may otherwise result in a biased work product, or (B) may result in an unfair competitive advantage. It does not include the normal flow of benefits from the performance of a contract.

2. If the **Contractor** indicates that there are organizational conflicts of interest in the "Organizational Conflicts of Interest Representation", the **Contractor** shall provide a statement which describes in a concise manner all relevant facts concerning any present or currant planned interest (financial, contractual, organizational, or otherwise) relating to the work to be performed in the proposed contract and bearing on whether the **Contractor** has a possible organizational conflict of interest with respect to being able to render impartial, technically sound, and objective assistance or advice, or being given an unfair competitive advantage. The **Contractor** may also provide relevant facts that show how its organizational structure and/or management systems limit its knowledge of possible organizational conflicts of interest relating to other divisions or sections of the organization and how that structure of system would eliminate or neutralize such organizational conflict.

Name: _____

Title: _____

Signature: _____

Date: _____

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DISCLOSURE OF OWNERSHIP OR CONTROL BY GOVERNMENT OF A TERRORIST COUNTRY

1. "Definitions." As used in this provision:

(1) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means to be a country the government of which has repeatedly provided support for such acts of international terrorism.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

2. "Prohibition on award."

No contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary.

3. "Disclosure."

If the government of a terrorist country has a significant interest in the Contractor or a subsidiary of the Contractor, the Contractor shall disclose such interest as per the following criteria:

(1) Identification of each government holding a significant interest; and a description of the significant interest held by each government.

(2) If the Contractor is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary.

By signature below, the Contractor confirms that no Government of a terrorist country has any significant interest in the Contractor or any of its subsidiaries, and the Contractor is not included on the UK Government List of Parties Excluded from Federal Procurement and Non-procurement Programs.

Name: _____ Title: _____

Signature: _____ Date: _____

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ATTACHMENT F - SUMMARY OF PAST PERFORMANCE, EXPERIENCE & TECHNICAL CAPABILITY
(Information to be provided by Offeror as part of the technical proposal)

Name of Business or Firm: _____

Previous works undertaken as prime contractor, for works of similar type and size, from 2015 to 2020.
Express monetary values in US$

Project name	Client name	Types of works and year of completion	Value of works (In USD)	Certificate of completion Or copy of the contract attached (Yes/No)
1.				
2.				
3.				
4.				
5.				

[Include either a signed copy of each certificate of completion or copy of the contract for each project listed, please take note that if not included no points will be awarded]

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For each project listed above, please complete a table such as that presented below and attach separately evidence of the signed agreement:

Project #1	
Project Name/Title	
Description Of Work	
Cost in US$	
Site Location (Region/District)	
Client	
Reference Name:	
Email:	
Telephone:	
Type of Contract (e.g. fixed price, time-and-materials, cost plus fixed fee, etc.)	
Were You a Prime Contractor or a Sub Contractor?	
Quality Assured Contract (Yes/No)	
Contract Awarded Value and Final Cost	
Start Date – End Date	
Contract Commencing Date	
Contract Period (No. Of Months)	
Actual Date of Practical Completion	
Applicant Performance Report Available?	
Delays – External Factors (Working Days)	
Delays – Internal Factors (Working Days)	
Final Completion/ Certificate of completion attached (yes/no)	

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Project #2	
Project Name/Title	
Description Of Work	
Cost in US$	
Site Location (Region/District)	
Client	
Reference Name:	
Email:	
Telephone:	
Type of Contract (e.g. fixed price, time-and-materials, cost plus fixed fee, etc.)	
Were You a Prime Contractor or a Sub Contractor?	
Quality Assured Contract (Yes/No)	
Contract Awarded Value and Final Cost	
Start Date – End Date	
Contract Commencing Date	
Contract Period (No. Of Months)	
Actual Date of Practical Completion	
Applicant Performance Report Available?	
Delays – External Factors (Working Days)	
Delays – Internal Factors (Working Days)	
Final Completion/ Certificate of completion attached (yes/no)	

Location	**Wajaale, Somaliland**	PR NO	**026**
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Project #3	
Project Name/Title	
Description Of Work	
Cost in US$	
Site Location (Region/District)	
Client	
Reference Name:	
Email:	
Telephone:	
Type of Contract (e.g. fixed price, time-and-materials, cost plus fixed fee, etc.)	
Were You a Prime Contractor or a Sub Contractor?	
Quality Assured Contract (Yes/No)	
Contract Awarded Value and Final Cost	
Start Date – End Date	
Contract Commencing Date	
Contract Period (No. Of Months)	
Actual Date of Practical Completion	
Applicant Performance Report Available?	
Delays – External Factors (Working Days)	
Delays – Internal Factors (Working Days)	
Final Completion/ Certificate of completion attached (yes/no)	

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Project #4	
Project Name/Title	
Description Of Work	
Cost in US$	
Site Location (Region/District)	
Client	
Reference Name:	
Email:	
Telephone:	
Type of Contract (e.g. fixed price, time-and-materials, cost plus fixed fee, etc.)	
Were You a Prime Contractor or a Sub Contractor?	
Quality Assured Contract (Yes/No)	
Contract Awarded Value and Final Cost	
Start Date – End Date	
Contract Commencing Date	
Contract Period (No. Of Months)	
Actual Date of Practical Completion	
Applicant Performance Report Available?	
Delays – External Factors (Working Days)	
Delays – Internal Factors (Working Days)	
Final Completion/ Certificate of completion attached (yes/no)	

Location	**Wajaale, Somaliland**	PR NO	**026**
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Project #5	
Project Name/Title	
Description Of Work	
Cost in US$	
Site Location (Region/District)	
Client	
Reference Name:	
Email:	
Telephone:	
Type of Contract (e.g. fixed price, time-and-materials, cost plus fixed fee, etc.)	
Were You a Prime Contractor or a Sub Contractor?	
Quality Assured Contract (Yes/No)	
Contract Awarded Value and Final Cost	
Start Date – End Date	
Contract Commencing Date	
Contract Period (No. Of Months)	
Actual Date of Practical Completion	
Applicant Performance Report Available?	
Delays – External Factors (Working Days)	
Delays – Internal Factors (Working Days)	
Final Completion/ Certificate of completion attached (yes/no)	

ATTACHMENT G - KEY SITE STAFF (CV AND CERTIFICATES MUST BE ATTACHED)

Please provide CVs indicating number of years of experience together with Educational and Technical Certificates and photo id.

#	Key Site Staff
1	Name: Title/ Position: Description of Education Qualification: Description of Relevant Work Experience:
2	Name: Title/ Position: Description of Education Qualification: Description of Relevant Work Experience:

3	Name: Title/ Position: Description of Education Qualification: Description of Relevant Work Experience:
4	Name: Title/ Position: Description of Education Qualification: Description of Relevant Work Experience:

5	Name: Title/ Position: Description of Education Qualification: Description of Relevant Work Experience:
6	Name: Title/ Position: Description of Education Qualification: Description of Relevant Work Experience:

I hereby certify that all CV's are attached.

SIGNED: _____

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PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

ATTACHMENT H - LIST OF EQUIPMENT

If a bidder indicates that they own the equipment, then all the details in the form must be filled. If hired, the details requested may not be known and maybe omitted. **Bidder must attach proof of lease or ownership.**

#	Equipment Name	Model	Year of manufacture	# allocated for the project	Owned/Hired
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

We hereby certify that notwithstanding the list of equipment detailed above, we will provide sufficient, suitable and adequate equipment in good working order for the successful completion of works.

_____ _____

Signature of Contractor Date

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

ATTACHMENT I - VALUE OF THE WORKS CURRENTLY UNDER CONTRACT (ONGOING WORKS)

The bidder is to list the construction projects which he is currently executing, their value and the expected completion date.

#	Project Name	Date Completed	Contract Sum (USD)	Clients' Name and Address
1				
2				
3				
4				
5				
6				
TOTAL				

Signature of Contractor

Date

ATTACHMENT J - LIST OF LOCAL LABORERS

The bidder having worked a detailed methodology should have a clear view of the amount of labor effort required in completion of the works. It is recommended to use local labor as far as practicable in the works and additional scores will be obtained on use of female labor.

Type of Local Labor	Total Number of Local Males	Total Number of Local Females
Skilled		
Unskilled		
TOTAL LOCAL LABOR		

Signature of Contractor

Date

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

ATTACHMENT K - METHODOLOGY WORKS SCHEDULE

K.1 Methodology (describe major activities and how will they be implemented: procurement, mobilization to project site (including materials delivery and project office and housing for workers), and all construction activities excavation, demolition, floors, walls, ring beam, ceiling, finishing, water supply and distribution system, electrical supply and distribution system, latrines, and landscaping) The duration for each activity with a planned start and end date, How supervision will be monitored weekly, proposed a payment schedule base on progress for each BOQ line item .

Major Activities (please describe how they will be implemented).

Supervision and Quality Control (please describe how is to be done)

Location	**Wajaale, Somaliland**	PR NO	**026**
MONTH	**January/February 2026**		
PROJECT NAME	**PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE**		

K-2 Work Plan-The bidder shall break down their tasks and prepare a detailed resource-based program of works on a Gantt chart to ensure completion within the stated time frame in the format shown below.

Note, the below is <u>ONLY A SAMPLE</u> and the bidder is required to prepare his program and attach here.

Program Name:SINAAN

Project Name: Purchase, Supply and Installation of Solar PV System & BESS for 6 Buildings in Wajaale

Project Location: Wajaale, Somaliland

Name of organization/firm:_____

WORK SCHEDULE

Title	ITEM DESCRIPTION	MONTH 1				MONTH 2				MONTH 3				MONTH 4				MONTH 5				MONTH 6				MONTH 7				MONTH 8			
A	**PRELIMINARIES**																																
A1	Mobilization, preliminary works, clearing of site , site establishment including all required necessary construction materials and tools.																																
1	**PREPARATORY WORKS**																																
1.1	Site Electrical/Civil Work																																
1.2	Cold Room Panel Fabrication																																
2	**INSTALLATION PHASE I**																																
2.1	All material delivering on site																																
2.2	PV Mounting & Cabling																																
2.3	Solar PV & BESS/Streetlight Foundations																																
3	**INSTALLATION PHASE II**																																
3.1	Inverters, BESS & Cold Rooms																																
3.2	Streetlight Pole Erection																																
4	**COMMISSIONING & HANDOVER**																																
4.1	O&M Staff Training (Technicians/Vendors)																																
4.2	Delivery of O&M Manuals & Drawings																																
4.3	Routine Maintenance (Cleaning/Inspection)																																
4.4	Warranty & Tech Support Monitoring																																

Location	Wajaale, Somaliland	PR NO	026
MONTH	January/February 2026		
PROJECT NAME	PURCHASE, SUPPLY, AND INSTALLATION OF SOLAR PV SYSTEM & BESS FOR 6 BUILDINGS IN WAJAALE		

ATTACHMENT L - BANK DETAILS FOR PAYMENTS (VENDOR PAYMENT INFORMATION)

VENDOR PAYMENT INFORMATION

Vendor/Beneficiary Information:	
Vendor Name:	
Vendor Address:	

Beneficiary Bank/Account Information:	
Bank Name:	
Bank Address:	
Full Name on the Account:	
Account Number:	
Routing Number:	
SWIFT Code:	
IBAN:	

Intermediary Bank Information:	
Bank Name:	
Bank Address:	
Account Number:	
Routing Number:	
Other Information:	

Special Instructions/Other Information:

Signed & Stamped: _____

ATTACHMENT M - COST PROPOSAL – BILL OF QUANTITIES (TO BE FILLED)

Bills of Quantities -Preamble

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Technical Specifications, Designs and Drawings.
2. The rates and prices bid in the Bill of Quantities should include all labor, supervision, materials, equipment, erection, maintenance, insurance, **taxes, and duties**, together with all general risks, liabilities, and obligations set out or implied in the Contract.
3. A rate or price shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
4. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the un-priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
5. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the Bill of Quantities.
6. The method of measurement of completed work for payment shall be in accordance with CESSM - Collaborative Evaluation of Semantic Similarity.

Errors will be corrected by the Employer for any arithmetic errors in computation or summation as follows: Where there is a discrepancy between amounts in figures and in words, the amount in words will govern; and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will govern, unless in the opinion of the Bid Committee, there is an obviously gross misplacement of the decimal point in the unit price, in which event the total amount as quoted will govern and the unit rate will be corrected.

Bidders Compliance Table to Minimum Technical Requirements

Bidders shall complete the following Compliance Table to demonstrate conformity with the technical specifications and scope of supply and installation of Hybrid Solar PV + Battery Energy Storage Systems (BESS).

The Compliance Table shall clearly indicate whether the offered equipment and services fully Comply, Partially Comply, or Do Not Comply with each requirement. Any deviation shall be clearly described and supported by technical documentation.

Note: Failure to submit a duly completed Compliance Table, or submission of misleading or incomplete information, may result in disqualification of the bid.

Ref. No.	Component / System	Minimum Technical Requirement	Applicable Standard	Compliance (Yes / No)	Deviation / Alternative Offered	Remarks / Reference
1	Overall System Design	Hybrid SPV + BESS system sized as per BoQ and facility load demand	IEC / IEEE			
2	Solar PV Modules	Mono-crystalline, ≥20% efficiency	IEC 61215 / IEC 61730			
3	PV Module Warranty	≥10–12 years product, ≥25 years performance	Manufacturer			
4	PV Connectors	MC4 or approved equivalent	IEC 62852			
5	PV DC Cables	UV-resistant, PV-rated	IEC 62930			
6	Battery Chemistry	$LiFePO_4$ (Lithium Iron Phosphate)	IEC 62619			
7	Battery Cycle Life	≥6,000 cycles @ ≥80% DoD	IEC 61427			
8	Battery Management System	Integrated BMS with protection & balancing	IEC 63056			
9	Battery Enclosure	IP-rated, suitable for indoor/outdoor installation	IEC 60529			
10	Hybrid Inverter Type	Hybrid (PV + Battery + Grid/Generator)	IEC 62109			
11	Inverter Efficiency	≥97%	IEC 61683			
12	Output Voltage & Frequency	230 V / 400–415 V, 50 Hz	IEC 60038			
13	Anti-Islanding Protection	Mandatory	IEC 62116			
14	Monitoring System	Local display + remote monitoring	IEC 61724			
15	Solar Charge Controller	MPPT, $LiFePO_4$ compatible	IEC 62509			

16	Earthing System	Dedicated earth pits, DC & AC grounding	IEC 60364-5-54			
17	Surge Protection Devices	DC & AC SPDs installed	IEC 61643-11			
18	Lightning Protection	System bonding & protection	IEC 62305			
19	Mounting Structures	Hot-dip galvanized / aluminum	ISO 1461			
20	Cable Management	UV-resistant conduits & labeling	IEC 60364			
21	Installation Workmanship	Qualified & certified personnel	DT GLOBAL			
22	Quality Control Plan (QCP)	Project-specific QCP submitted	DT GLOBAL			
23	Health, Safety & Security Plan (HSSP)	HSSP submitted and approved	DT GLOBAL			
24	Environmental Compliance	EMMP measures implemented	ISO 14001			
25	Mandatory Spare Parts	Supplied as per BOQ	Contract			
26	O&M Tools Kit	Supplied as per BOQ	Contract			
27	O&M Manuals	Complete manuals provided	IEC 62446			
28	Training	Operator & maintenance training provided	Contract			
29	Testing & Commissioning	Full testing reports submitted	IEC 62446			
30	Warranty & Support	Warranty certificates & service support	Contract			

Bidder Declaration

We hereby certify that the equipment and services offered under this bid comply with the above technical specifications except as explicitly stated under the “Deviation / Alternative Offered” column.

Bidder Name: _____

Authorized Representative: _____

Signature & Date: _____

COST PROPOSAL TABLE - BILL OF QUANTITIES (BOQ)

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase, Supply and Installation of PV Systems + BESS at Multiple locations- Wajaale

Project Location:Wajaale, Somaliland

Name of organization/firm:_____

BILL SUMMARY

S#	ITEM DESCRIPTION	AMOUNT (USD)
1	Preliminaries, Safety Gear, Training and Shipping	-
2	Municipality	-
3	Wajaale Main/District Hospital	-
4	Wajaale MCH Central	-
5	Wajaale MCH 26 June	-
6	Wajaale Immigration Point	-
7	Wajaale Women's Market (West)	-
8	Mandatory Spare Parts	-
9	Maintenance Kits	-
GRAND TOTAL		**-**
GRAND TOTAL in Words:		
**	**Operation and Maintenance for one year after Defect and Liabilty period (Optional)**	-

Note

1. All quoted price shall include materials mobilization, transportation and labor cost.
2. The Bidder MUST provide Excel file and signed and stamp PDF copy of this document

SIGNATURE

STAMP

BILL OF QUANTITY

Purchase, Supply and Installation of PV Systems + BESS at Multiple locations- Wajaale

Name of organization/firm:_____

NOTE	**The Quoted price shall include all labor, material, Shipment, custom clearances, logistics of staff and transportation of all materials to site, Loading and off loading of material, equipment usage (POL), security of Contractor's personnel, profit and any government taxation costs**

Title	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE (USD)
1	**PRELIMINARIES**				
1.1	Mobilization and Demobilization, preliminary works, clearing of site , site establishment including all required necessary construction materials and tools.	LS	1.00		-
2	**SAFETY GEAR ASSORTED FOR CONTRACTOR STAFF**				
2.1	Reflector Jackets	L.S	12.00		-
2.2	Safety Shoes	L.S	12.00		-
2.3	Helmet	L.S	12.00		-
2.4	Safety Glasses	L.S	12.00		-
2.5	Gloves	L.S	12.00		-
3	**TRAININGS**				
3.1	Onsite Training for Operation and Maintenance	L.S	1.00		-
4	**SHIPPING/FREIGHT**				
4.1	Material Shipping/Freight, transport, insurance, and customs cost for all sites	L.S	1.00		-
GRAND TOTAL					**-**

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase Supply and Installation of 25 kWp Hybrid PV System

Project Location: Wajaale Municipality, Somaliland

Item No	Description	Unit	Quantity	DAP Unit Price (USD)	DAP Total Price (USD)
1	Supply, and deliver of JINKO 66HL4M-BDV or Equivalent, 575 - 625Wp N-type mono-crystalline solar photovoltaic (PV) modules/arrays, with a minimum total installed capacity of 25 kWp	Each	42		0
2	Supply and deliver anodized Aluminum PV modules/Array mounting frames/structures, Specifically AA 6063 T6, AL 6005-T5, or 6061 for item (1) above c/w accessories and stainless steels fittings (bolts, nuts etc) for on-roof mounting.	Per Kwp	25		0
3	Supply and deliver of hybrid smart solar PV inverter system, minimum 15 kW. The inverters shall be capable of parallel operation to achieve a combined minimum system capacity of 30 kW, delivering single-phase AC output at 415V. The system shall be modular and expandable to allow future capacity increase without major system modifications. Including **certified bi-directional energy meter**, protection devices and monitoring.	Nos	2		0
4	Supply, deliver and Installation of 60 KWh Lithium-Iron Phosphate ($LiFePO_4$) Battery Energy Storage System (BESS) , each with rated capacity of not less than 10KWh, including battery inverter/chargers, enclosure or rack-mounted type, scalable and compatible with future expansion.	Per Kwp	60		0
5	Supply and delivery of integrated LED floodlights for compound/security lighting, rated at 100 W with a minimum luminous efficacy of 115 lm/W and a luminous flux of not less than 11,500 lumens. The luminaires shall have a correlated color temperature of 6000 K–6500 K (cool daylight/white suitable for security applications) and a minimum service life of 50,000 operating hours (L70). The housing shall be manufactured from die-cast aluminum with corrosion-resistant powder coating. The scope shall include a 4-inch diameter, 6-meter-high steel pole, complete with installation cables, mounting hardware, and all associated accessories required for proper installation as per site conditions.	Each	10		0
6	Supply and installation of a 32-way consumer unit / distribution board (DB) for municipal loads, complete with main isolator, MCBs/MCCBs, RCDs/RCBOs where required, surge protection devices (SPDs), neutral and earth bars, enclosure, labeling, and circuit schedules, compliant with IEC standards.	Lot	1		0
7	Upgrade and rectification of existing internal electrical wiring, where necessary, to ensure compatibility with the new PV-BESS system, including replacement of undersized or damaged cables, improved routing, terminations, earthing continuity, and compliance with applicable electrical standards.	Lot	1		0
8	Supply and delivery of 4C × 16 sq.mm armored copper power cable, 100 meters, including glands, lugs, cleats, routing/trenching or conduit where required, termination, testing, and commissioning, to provide a dedicated electrical connection between the hybrid inverter output and the existing main distribution board (DB).	Lot	1		0
9	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability. **(Only Applicable if the proposed inverter does not contain system control and remote monitoring)**	Lot	1		0
10	Supply and deliver all balance of system (BOS) components, "The BOS shall include, but not be limited to, all electrical (AC/DC Wiring), mechanical, civil, earthing, protection, communication, safety, testing, commissioning, and auxiliary items necessary for a fully operational, compliant, and warrantable system, whether or not individually itemized in the BOQ	Lot	1		0
11	Installation & Commissioning (Labor, testing, commissioning)	Lot	1		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase Supply and Installation of 25 kWp Hybrid PV System

Project Location: Wajaale Main Hospital

Item No	Description	Unit	Quantity	DAP Unit Price (USD)	DAP Total Price (USD)
1	Supply, and deliver of JINKO 66HL4M-BDV or Equivalent, 575 - 625Wp N-type mono-crystalline solar photovoltaic (PV) modules/arrays, with a minimum total installed capacity of 25 kWp	Nos	42		0
2	Supply and deliver anodized Aluminum PV modules/Array mounting frames/structures, Specifically AA 6063 T6, AL 6005-T5, or 6061 for item (1) above c/w accessories and stainless steels fittings (bolts, nuts etc) for on-Ground mounting.	Per Kwp	25		0
3	Supply and deliver of hybrid smart solar PV inverter system, minimum 15 kW. The inverters shall be capable of parallel operation to achieve a combined minimum system capacity of 30 kW, delivering single-phase AC output at 415V. The system shall be modular and expandable to allow future capacity increase without major system modifications. Including **certified bi-directional energy meter**, protection devices and monitoring.	Nos	2		0
4	Supply, deliver and Installation of 60 KWh Lithium-Iron Phosphate ($LiFePO_4$) Battery Energy Storage System (BESS) , each with rated capacity of not less than 15KWh, including battery inverter/chargers, enclosure or rack-mounted type, scalable and compatible with future expansion.	Per Kwp	60		0
5	Supply and delivery of dedicated Online (double-conversion) UPS system rated at 125 kVA for X-ray equipment, including static bypass, internal maintenance bypass, input/output isolation, and battery autonomy as per manufacturer standards. UPS to serve power-quality and ride-through only.	Each	1		0
6	Supply and delivery of integrated LED floodlights for compound/security lighting, rated at 100 W with a minimum luminous efficacy of 115 lm/W and a luminous flux of not less than 11,500 lumens. The luminaires shall have a correlated color temperature of 6000 K–6500 K (cool daylight/white suitable for security applications) and a minimum service life of 50,000 operating hours (L70). The housing shall be manufactured from die-cast aluminum with corrosion-resistant powder coating. The scope shall include a 4-inch diameter, 6-meter-high steel pole, complete with installation cables, mounting hardware, and all associated accessories required for proper installation as per site conditions.	Each	10		0
7	Supply and installation of a 32-way consumer unit / distribution board (DB) for hospital loads, complete with incoming main isolator, MCBs/MCCBs, RCDs/RCBOs where required, surge protection devices (SPDs), neutral and earth bars, enclosure, labeling, and circuit schedules, compliant with IEC standards.	Lot	1		0
8	Upgrade and rectification of existing internal electrical wiring, where necessary, to ensure compatibility with the new PV-BESS and UPS systems, including replacement of undersized or damaged cables, improved routing, proper terminations, earthing continuity, and compliance with applicable electrical standards.	Lot	1		0
9	Supply and delivery of 4C × 70 sq.mm armored copper power cable, 100 meters, including glands, lugs, cleats, trenching/conduit where required, termination, testing, and commissioning, to provide a dedicated electrical connection between the X-ray equipment and the UPS system.	Lot	1		0
10	Supply and delivery of 4C × 16 sq.mm armored copper power cable, 100 meters, including cable accessories, routing, termination, testing, and commissioning, to provide a dedicated electrical connection between the hybrid inverter output and the existing main distribution board (DB) location.	Lot	1		0
11	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability. **(Only Applicable if the proposed inverter does not contain system control and remote monitoring)**	Lot	1		0
12	Supply and deliver all balance of system (BOS) components, "The BOS shall include, but not be limited to, all electrical (AC/DC Wiring), mechanical, civil, earthing, protection, communication, safety, testing, commissioning, and auxiliary items necessary for a fully operational, compliant, and warrantable system, whether or not individually itemized in the BOQ	Lot	1		0
13	Installation & Commissioning (Labor, testing, commissioning)	Lot	1		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase Supply and Installation of 15 kWp Hybrid PV System

Project Location: Wajaale MCH Central

Item No	Description	Unit	Quantity	DAP Unit Price (USD)	DAP Total Price (USD)
1	Supply, and deliver of JINKO 66HL4M-BDV or Equivalent, 575 - 625Wp N-type mono-crystalline solar photovoltaic (PV) modules/arrays, with a minimum total installed capacity of 15 kWp	Nos	25		0
2	Supply and deliver anodized Aluminum PV modules/Array mounting frames/structures, Specifically AA 6063 T6, AL 6005-T5, or 6061 for item (1) above c/w accessories and stainless steels fittings (bolts, nuts etc) for on-roof mounting.	Per Kwp	15		0
3	Supply and deliver of hybrid smart solar PV inverter system, minimum 15 kW. The inverters shall be capable of parallel operation to achieve a combined minimum system capacity of 15 kW, delivering single-phase AC output at 240V. The system shall be modular and expandable to allow future capacity increase without major system modifications. Including **certified bi-directional energy meter**, protection devices and monitoring.	Nos	1		0
4	Supply, deliver and Installation of 30 KWh Lithium-Iron Phosphate ($LiFePO_4$) Battery Energy Storage System (BESS) , each with rated capacity of not less than 10KWh, including battery inverter/chargers, enclosure or rack-mounted type, scalable and compatible with future expansion.	Per Kwp	30		0
5	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability.	Lot	1		0
6	Supply and delivery of integrated LED floodlights for compound/security lighting, rated at 100 W with a minimum luminous efficacy of 115 lm/W and a luminous flux of not less than 11,500 lumens. The luminaires shall have a correlated color temperature of 6000 K–6500 K (cool daylight/white suitable for security applications) and a minimum service life of 50,000 operating hours (L70). The housing shall be manufactured from die-cast aluminum with corrosion-resistant powder coating. The scope shall include a 4-inch diameter, 6-meter-high steel pole, complete with installation cables, mounting hardware, and all associated accessories required for proper installation as per site conditions.	Each	6		0
7	Supply and installation of a 12-way consumer unit / distribution board (DB) for MCH loads, complete with incoming isolator, MCBs, RCDs/RCBOs where required, surge protection devices (SPDs), neutral and earth bars, enclosure, labeling, and circuit schedule, compliant with IEC standards.	Lot	1		0
8	Supply and delivery of 4C × 16 sq.mm armored copper power cable, 30 meters, including cable glands, lugs, cleats, routing/conduit where required, termination, testing, and commissioning, to connect the hybrid inverter output to the existing MCH distribution board.	Lot	1		0
9	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability. **(Only Applicable if the proposed inverter does not contain system control and remote monitoring)**	Lot	1		0
10	Supply and deliver all balance of system (BOS) components, "The BOS shall include, but not be limited to, all electrical (AC/DC Wiring), mechanical, civil, earthing, protection, communication, safety, testing, commissioning, and auxiliary items necessary for a fully operational, compliant, and warrantable system, whether or not individually itemized in the BOQ	Lot	1		0
11	Installation & Commissioning (Labor, testing, commissioning)	Lot	1		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase Supply and Installation of 15 kWp Hybrid PV System

Project Location: Wajaale MCH 26 June

Item No	Description	Unit	Quantity	DAP Unit Price (USD)	DAP Total Price (USD)
1	Supply, and deliver of JINKO 66HL4M-BDV or Equivalent, 575 - 625Wp N-type mono-crystalline solar photovoltaic (PV) modules/arrays, with a minimum total installed capacity of 15 kWp	Nos	25		0
2	Supply and deliver anodized Aluminum PV modules/Array mounting frames/structures, Specifically AA 6063 T6, AL 6005-T5, or 6061 for item (1) above c/w accessories and stainless steels fittings (bolts, nuts etc) for Ground mounting.	Per Kwp	15		0
3	Supply and deliver of hybrid smart solar PV inverter system, minimum 15 kW. The inverters shall be capable of parallel operation to achieve a combined minimum system capacity of 15 kW, delivering single-phase AC output at 240V. The system shall be modular and expandable to allow future capacity increase without major system modifications. Including **certified bi-directional energy meter**, protection devices and monitoring.	Nos	1		0
4	Supply, deliver and Installation of 30 KWh Lithium-Iron Phosphate ($LiFePO_4$) Battery Energy Storage System (BESS) , each with rated capacity of not less than 10KWh, including battery inverter/chargers, enclosure or rack-mounted type, scalable and compatible with future expansion.	Per Kwp	30		0
5	Supply and installation of a 12-way consumer unit / distribution board (DB) for MCH loads, complete with incoming isolator, MCBs, RCDs/RCBOs where required, surge protection devices (SPDs), neutral and earth bars, enclosure, labeling, and circuit schedule, compliant with IEC standards.	Lot	1		0
6	Upgrade and rectification of existing internal electrical wiring, where necessary, to ensure compatibility with the new PV-BESS system, including replacement of undersized or damaged cables, improved routing, proper terminations, earthing continuity, and compliance with applicable electrical standards.	Lot	1		0
7	Supply and delivery of 4C × 16 sq.mm armored copper power cable, 30 meters, including cable glands, lugs, cleats, routing/conduit where required, termination, testing, and commissioning, to connect the hybrid inverter output to the existing MCH distribution board.	Lot	1		0
8	**Construction of a dedicated, secure, and well-ventilated battery energy storage system (BESS), inverter, and electrical control/monitoring room with minimum internal dimensions of 3.0 m × 3.0 m × 3.5 m (L × W × H)**. The Room shall be equipped with a suitably sized air-conditioning system to maintain safe operating temperatures for batteries and power electronics. The scope includes all civil, architectural, mechanical, and electrical works, internal lighting, fire safety provisions, earthing, cable entries, and allowance for future system expansion, as well as perimeter security and safety fencing for the solar PV panel area with lockable access and safety signage as per drawings	Lot	1		0
9	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability. **(Only Applicable if the proposed inverter does not contain system control and remote monitoring)**	Lot	1		0
10	Supply and deliver all balance of system (BOS) components, "The BOS shall include, but not be limited to, all electrical (AC/DC Wiring), mechanical, civil, earthing, protection, communication, safety, testing, commissioning, and auxiliary items necessary for a fully operational, compliant, and warrantable system, whether or not individually itemized in the BOQ	Lot	1		0
11	Installation & Commissioning (Labor, testing, commissioning)	Lot	1		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase Supply and Installation of 15 kWp Hybrid PV System

Project Location:Wajaale Immigration Point

Item No	Description	Unit	Quantity	DAP Unit Price (USD)	DAP Total Price (USD)
1	Supply, and deliver of JINKO 66HL4M-BDV or Equivalent, 575 - 625Wp N-type mono-crystalline solar photovoltaic (PV) modules/arrays, with a minimum total installed capacity of 15 kWp	Nos	25		0
2	Supply and deliver anodized Aluminum PV modules/Array mounting frames/structures, Specifically AA 6063 T6, AL 6005-T5, or 6061 for item (1) above c/w accessories and stainless steels fittings (bolts, nuts etc) for on-roof mounting.	Per Kwp	15		0
3	Supply and deliver of hybrid smart solar PV inverter system, minimum 15 kW. The inverters shall be capable of parallel operation to achieve a combined minimum system capacity of 15 kW, delivering single-phase AC output at 240V. The system shall be modular and expandable to allow future capacity increase without major system modifications. Including **certified bi-directional energy meter**, protection devices and monitoring.	Nos	1		0
4	Supply, deliver and Installation of 30 KWh Lithium-Iron Phosphate ($LiFePO_4$) Battery Energy Storage System (BESS) , each with rated capacity of not less than 10KWh, including battery inverter/chargers, enclosure or rack-mounted type, scalable and compatible with future expansion.	Per Kwp	30		0
5	Supply and delivery of integrated LED floodlights for compound/security lighting, rated at 100 W with a minimum luminous efficacy of 115 lm/W and a luminous flux of not less than 11,500 lumens. The luminaires shall have a correlated color temperature of 6000 K–6500 K (cool daylight/white suitable for security applications) and a minimum service life of 50,000 operating hours (L70). The housing shall be manufactured from die-cast aluminum with corrosion-resistant powder coating. The scope shall include a 4-inch diameter, 6-meter-high steel pole, complete with installation cables, mounting hardware, and all associated accessories required for proper installation as per site conditions.	Each	6		0
6	Supply and installation of a 12-way consumer unit / distribution board (DB) for Immigration Point loads, complete with incoming isolator, MCBs, RCDs/RCBOs where required, surge protection devices (SPDs), neutral and earth bars, enclosure, labeling, and circuit schedule, compliant with IEC standards.	Lot	1		0
7	Upgrade and rectification of existing internal electrical wiring, where necessary, to ensure compatibility with the off-grid PV-BESS system, including replacement of undersized or damaged cables, improved routing, proper terminations, earthing continuity, and compliance with applicable electrical standards.	Lot	1		0
8	Supply and delivery of 4C × 16 sq.mm armored copper power cable, 30 meters, including cable glands, lugs, cleats, routing/conduit where required, termination, testing, and commissioning, to connect the hybrid inverter output to the main distribution board.	Lot	1		0
9	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability. **(Only Applicable if the proposed inverter does not contain system control and remote monitoring)**	Lot	1		0
10	Supply and deliver all balance of system (BOS) components, "The BOS shall include, but not be limited to, all electrical (AC/DC Wiring), mechanical, civil, earthing, protection, communication, safety, testing, commissioning, and auxiliary items necessary for a fully operational, compliant, and warrantable system, whether or not individually itemized in the BOQ	Lot	1		0
11	Installation & Commissioning (Labor, testing, commissioning)	Lot	1		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

BILL OF QUANTITY (BOQ)

Program Name: SINAAN

Project Name: Purchase Supply and Installation of 15 kWp Hybrid PV System

Project Location: Wajaale Women's Market (West)

Item No	Description	Unit	Quantity	DAP Unit Price (USD)	DAP Total Price (USD)
1	Supply, and deliver of JINKO 66HL4M-BDV or Equivalent, 575 - 625Wp N-type mono-crystalline solar photovoltaic (PV) modules/arrays, with a minimum total installed capacity of 15 kWp	Nos	25		0
2	Supply and deliver anodized Aluminum PV modules/Array mounting frames/structures, Specifically AA 6063 T6, AL 6005-T5, or 6061 for item (1) above c/w accessories and stainless steels fittings (bolts, nuts etc) for Ground mounting.	Per Kwp	15		0
3	Supply and deliver of hybrid smart solar PV inverter system, minimum 15 kW. The inverters shall be capable of parallel operation to achieve a combined minimum system capacity of 15 kW, delivering single-phase AC output at 240V. The system shall be modular and expandable to allow future capacity increase without major system modifications. Including **certified bi-directional energy meter**, protection devices and monitoring.	Nos	1		0
4	Supply, deliver and Installation of 30 KWh Lithium-Iron Phosphate ($LiFePO_4$) Battery Energy Storage System (BESS) , each with rated capacity of not less than 10KWh, including battery inverter/chargers, enclosure or rack-mounted type, scalable and compatible with future expansion.	Per Kwp	30		0
5	Supply and delivery of integrated LED floodlights for compound/security lighting, rated at 100 W with a minimum luminous efficacy of 115 lm/W and a luminous flux of not less than 11,500 lumens. The luminaires shall have a correlated color temperature of 6000 K–6500 K (cool daylight/white suitable for security applications) and a minimum service life of 50,000 operating hours (L70). The housing shall be manufactured from die-cast aluminum with corrosion-resistant powder coating. The scope shall include a 4-inch diameter, 6-meter-high steel pole, complete with installation cables, mounting hardware, and all associated accessories required for proper installation as per site conditions.	Each	8		0
6	Supply and installation of a 12-way consumer unit / distribution board (DB) for the Women's Market, complete with incoming isolator, MCBs, RCDs/RCBOs where required, surge protection devices (SPDs), neutral and earth bars, enclosure, labeling, and circuit schedule, compliant with IEC standards.	Lot	1		0
7	Upgrade and rectification of existing internal electrical wiring, where necessary, to ensure compatibility with the new PV-BESS system and freezer loads, including replacement of undersized or damaged cables, improved routing, proper terminations, earthing continuity, and compliance with applicable electrical standards.	Lot	1		0
8	Supply and delivery of 4C × 16 sq.mm armored copper power cable, 30 meters, including cable glands, lugs, cleats, routing/conduit where required, termination, testing, and commissioning, to connect the hybrid inverter output to the market distribution board	Lot	1		0
9	Supply and deliver System control and data acquisition (SCADA) and peripherals equipment with remote monitoring and control capability. **(Only Applicable if the proposed inverter does not contain system control and remote monitoring)**	Lot	1		0
10	Supply and deliver all balance of system (BOS) components, "The BOS shall include, but not be limited to, all electrical (AC/DC Wiring), mechanical, civil, earthing, protection, communication, safety, testing, commissioning, and auxiliary items necessary for a fully operational, compliant, and warrantable system, whether or not individually itemized in the BOQ	Lot	1		0
11	Installation & Commissioning (Labor, testing, commissioning)	Lot	1		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

Purchase, Supply and Deliver Mandatory Spare parts

(Hybrid Solar PV + BESS – Facility Based)

The project requires at least to provide minimum number of specified pares. The Supplier shall supply the following Mandatory Spares, compose and deliver at the Project commissioning Period an optimal package of spare parts typically comprising the following items.

Item No.	Description	Unit	Qty	DAP Unit Price (USD)	DAP Total Price (USD)
1. Solar PV System Spares					
1.1	PV Modules 575Wp- 625Wp	Each	16		0
1.2	3-Ph PV Inverters	Each	4		0
1.3	1-Ph PV Inverters	Each	1		0
1.4	PV DC Circuit Breaker	Each	16		0
1.5	DC Surge Protection Device (SPD)	Each	4		0
1.6	MC4 Connector Pair	Pair	40		0
1.7	PV DC Cable	m	200		0
2. Battery Energy Storage System (BESS)					
2.1	$LiFePO_4$ Battery Module				
2.1.1	15Kw	Each	6		0
2.2	Battery BMS Communication Cable (6.0mt CAN Bus and RS485), including RJ45 connectors	Each	16		0
2.3	Battery DC Fuse	Each	7		0
2.4	Battery DC Isolator	Each	7		0
3. Power Conversion & Control Spares					0
3.1	Hybrid Inverter Control Board	Each	1		0
3.2	Inverter Cooling Fan	Each	2		0
3.3	MPPT Charge Controller	Each	2		0
3.4	Sensor Set	Nos	1		0
3.5	Inverter Communication Module	Each	1		0
4. Main AC DB					
4.1	Type: 3 x 3 Ph outgoes	Each	2		0
4.2	Type: 5 x 1 Ph outgoes	Each	2		0
4.3	Type: 10 x 3 Ph outgoes'	Each	2		0
4.4	DC DB 3 phase standard with Combiner box	Each	2		0
4.5	DC DB 1 phase standard with Combiner box	Each	2		0
4.6	Cable Lugs & Termination Kit	Set	4		0
5. Lightning protection (AC and DC)					
5.1	AC Surge arrestors (class 2 3PH + N)	Nos	1		0
5.2	AC Surge arrestors (class 1&2 1PH + N)	Nos	2		0
5.3	DC Surge arrestors (class 1&2 +Ve + -Ne)	Nos	3		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

Purchase, Supply and Deliver Mandatory Maintenance Tools Kit

(For Hybrid Solar PV + BESS Facilities)

All tools provided and used by the Contractor shall be industrial-grade, insulated where applicable, and suitable for work on solar PV systems, battery energy storage systems (BESS), and low-voltage electrical installations. The tools shall comply with applicable safety standards and be properly maintained to ensure safe and efficient operation throughout the project.

Item No.	Description	Unit	Qty	DAP Unit Price (USD)	DAP Total Price (USD)
1	Fluke 381 models measure up to 1000V DC and 1000V AC True-RMS (or equivalent)	Ea	2		0
2	Fluke 376 FC, Current Clamp Meter 0–1000 Amp AC/DC, incl. thermocouple (or equivalent)	Ea	2		0
3	Basic Insulated Tool Kit (Screwdrivers, pliers, cutters, strippers, crimp tool, lugs, tape)	Set	4		0
4	Torque Wrench -Insulated, suitable for battery terminals	Ea	6		0
5	Insulated Spanner Set - For battery terminal nuts	Set	2		0
6	Earth Fault Tester - Earth resistance & continuity tester	Ea	2		0
7	Magnetic Compass (PV array orientation checks)	Ea	2		0
8	Tape Measure	Ea	2		0
9	6mt extension Step Ladder -Non-conductive, fiberglass	Ea	2		0
10	Water Bucket (Heavy duty plastic)	Ea	12		0
11	solar panel cleaning Squeegee	Ea	12		0
12	Cleaning Cloths (Disposable / microfiber)	Set	6		0
13	Stationery Kit (Labels, permanent markers)	Set	6		0
14	Fire Extinguisher - For BESS room - Class D dry powder (9 kg)	Ea	12		0
15	Fire Extinguisher - For BESS room -CO2 (5 kg)	Ea	12		0
16	High pressure washer - For Solar Panel cleaning	Ea	2		0
SUBTOTAL					**0**
Sub Total in words :					
NAME OF BIDDER:					
SIGNATURE OF BIDDER:					

Specifications – Builders Works

The works shall involve the Purchase, Supply and Installation of Solar PV System & BESSs in 6 Buildings in Wajaale as detailed in the drawing and outlined in the BOQ.

The Contractor shall undertake the Purchase, Supply and Installation of Solar PV System & BESSs in 6 Buildings in Wajaale as shown on the designs and drawings in conformity with the Specifications. The Contractor shall at all times use the best available materials and use only suitable construction methods.

SINAAN PROGRAMME will provide detailed Specifications for Purchase, Supply and Installation of Solar PV System & BESSs in 6 Buildings in Wajaale after the contract is awarded. No separate payment and mode of measurement will be made and given to any separate payment rather than contract payment.

ANNEXES – The following annexes are incorporated as reference as they will apply to the contract award.

Annex 1 - Scope of Work (SOW) & Technical Specifications
Annex 2 - Design Drawings
Annex 3 - Quality Assurance Plan
Annex 4 - Environmental Mitigation Requirements
Annex 5 - Health, Environmental, Safety & Security Plan (HESSP) Guide

ANNEX 1- Statement of Works (SOW) & Technical Specifications

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sikastaba | in every way

UK International Development
Partnership | Progress | Prosperity

Scope of Work (SoW)
and
Technical Specifications

Purchase, Supply, Installation, Testing, Commissioning of Hybrid Solar PV & BESS in Wajaale, Somaliland

Table of Contents

SCOPE OF WORKS & TECHNICAL SPECIFICATIONS

Sub-Project Name: Purchase, Supply, Installation, Testing, Commissioning of Hybrid Solar PV & BESS

Location: Wajaale, Somaliland

The proposed capacity and measured GPS Coordinates of the proposed Site/Facility location.

Facility Name		Coordinate Point	
	Capacity	Latitude	Longitude
Wajaale Municipality	25 kWp	9°36'35.31"N	43°20'44.01"E
Wajaale Main Hospital	25 kWp	9°37'0.49"N	43°20'31.25"E
Wajaale MCH (Central)	15 kWp	9°36'8.61"N	43°20'10.44"E
Wajaale MCH – 26 June	15 kWp	9°35'55.90"N	43°20'50.42"E
Wajaale Immigration Point	15 kWp	9°37'50.35"N	43°21'52.18"E
Wajaale Women's Market (West)	15 kWp	9°36'32.18"N	43°19'44.90"E

A. General Description

This Scope of Works (SoW) defines the requirements for the Purchase, Supply, Installation, Testing, Commissioning, and initial Operation and Maintenance (O&M) support of solar photovoltaic (PV) power systems and associated electrical infrastructure for Wajaale Facilities. The project is implemented under the DT GLOBAL / SINAAN Programme and targets public and institutional facilities within Wajaale District. The Contractor shall execute all works in strict accordance with the Contract Agreement, approved drawings, technical specifications, applicable international standards, and instructions issued by the Engineer.

B. Background

Facilities within Wajaale District experience limited access to reliable electricity, constraining essential services, operational efficiency, and safety. This intervention focuses on the deployment of standalone and hybrid solar PV-based power systems to ensure sustainable, resilient, and cost-effective energy supply. The project aligns with SINAAN programme objectives to strengthen local infrastructure, reduce reliance on fossil fuels, and promote environmentally responsible development.

C. Objective

The objectives are to:

- Supply and install reliable solar PV power systems for designated Wajaale facilities.
- Improve continuity of electricity supply for critical services and operations.

- Reduce operating costs and dependency on diesel generation.
- Establish a sustainable framework for long-term operation and maintenance through training and documentation.

D. Expected Outcomes and Targets

D.1. SMART Performance Indicators (KPIs)

1. System Installation & Commissioning

- **KPI 1.1: 100% of designated facilities equipped with fully installed, tested, and commissioned solar PV systems**
  Target: 100% completion
  Measurement: Engineer-issued Commissioning and Acceptance Certificates
  Timeframe: By Contract Completion Date

2. System Availability & Reliability

- **KPI 2.1:** ***Operational availability of solar PV systems***
  Target: ≥ 95% system availability during the first year of operation
  Measurement: Monitoring system logs and monthly performance reports
  Timeframe: Within 12 months after commissioning

- **KPI 2.2:** ***Reduction in unplanned power outages at facilities***
  Target: ≥ 50% reduction compared to pre-project baseline
  Measurement: Facility power outage records
  Timeframe: Within 6 months of commissioning

3. Energy Production & Performance

- **KPI 3.1:** ***Annual solar energy generation***
  Target: ≥ 95% of the calculated expected annual energy yield (kWh/year)
  Measurement: Inverter and monitoring system data
  Timeframe: First 12 months of operation

- **KPI 3.2:** ***Performance Ratio (PR)***
  Target: ≥ 75% (site-adjusted)
  Measurement: PV monitoring and performance analysis
  Timeframe: Within first year of operation

4. Environmental Impact

- **KPI 4.1:** ***Reduction in diesel fuel or grid electricity consumption***
  Target: ≥ 30% reduction compared to baseline consumption
  Measurement: Fuel consumption logs / utility bills
  Timeframe: Within 12 months after commissioning

- **KPI 4.2:** ***Reduction in greenhouse gas emissions (CO_2e)***
  Target: Quantified CO_2e reduction calculated based on verified energy generation
  Measurement: Annual energy generation × approved emission factor
  Timeframe: Annually during operation phase

5. Capacity Building & Training

- **KPI 5.1: Training of facility staff**
  Target: Minimum of **2–3 staff per facility** trained in basic operation, safety, and routine maintenance
  Measurement: Training attendance records and completion certificates
  Timeframe: Prior to Provisional Acceptance

- **KPI 5.2: Availability of O&M documentation**
  Target: 100% submission of approved O&M manuals, as-built drawings, and warranties
  Measurement: Engineer's approval and document handover records
  Timeframe: At commissioning and before Final Acceptance

6. HESSP & ESMP Compliance

- **KPI 6.1: Compliance with Environmental and Social Management Plan (ESMP)**
  Target: Zero major ESMP non-compliances
  Measurement: ESMP monitoring reports and audits
  Timeframe: Throughout construction and 6 Month Defect and Liability period

- **KPI 6.2: Health and Safety performance**
  Target: Zero fatal accidents and ≤ 1 Lost Time Injury (LTI)
  Measurement: HSSP records and incident reports
  Timeframe: Entire project duration

7. Handover & Sustainability

- **KPI 7.1: *Successful handover of operational systems***
  Target: 100% of facilities handed over with signed Provisional and Final Acceptance Certificates
  Measurement: Acceptance documentation
  Timeframe: As per Contract milestones

Performance shall be measured against SMART KPIs covering installation completion, system availability, energy generation, environmental impact, staff training, and ESSH compliance, as verified by the Engineer.

D.2. Output

Output 1: Solar PV Systems Installed and Commissioned

Output Indicators	Targets	Means of Verification	Assumptions
Facilities with commissioned PV systems	100% of designated facilities	Commissioning & Acceptance Certificates	Timely access to sites
Compliance with technical specs	100% compliance	Test reports, Engineer certification	Approved equipment delivered on time

Output 2: Improved Power Quality and Reliability

Output Indicators	Targets	Means of Verification	Assumptions
Performance Ratio (PR)	≥ 75% site-adjusted PR	Performance analysis reports	Proper system design and installation
Voltage/frequency stability	Within inverter limits	Monitoring logs	No abnormal load surges

Output 3: Environmental & Social Compliance Achieved

Output Indicators	Targets	Means of Verification	Assumptions
ESMP compliance	Zero major non-compliances	ESSH audit reports	Contractor implements ESMP
Health & Safety incidents	Zero fatalities; ≤ 1 LTI	HSSP records	Safety procedures followed

Output 4: Capacity Building and Knowledge Transfer

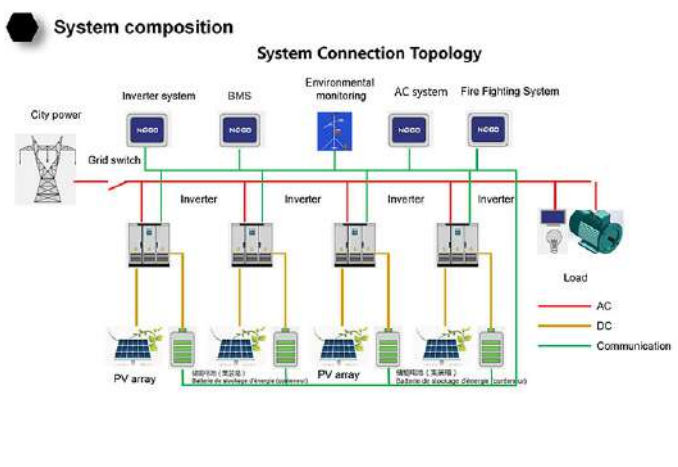
Output Indicators	Targets	Means of Verification	Assumptions
Facility staff trained	≥ 2–3 staff per facility	Training attendance sheets, certificates	Staff availability
O&M documentation delivered	100% submission	Approved O&M manuals, handover records	Contractor compliance

The project will deliver fully commissioned solar PV systems that improve power reliability, reduce fuel consumption and emissions, ensure ESSH compliance, and build local operational capacity. Performance will be measured through defined KPIs verified by monitoring data, commissioning certificates, and ESSH audits.

E. Activities

The Contractor shall perform, but not be limited to, the following activities:

- Site surveys and verification of facility condition and preparation of shop drawings before commencement**.**
- Design of SPV, BESS, SCADA, and electrical systems and submit SLD for each site with bid.
- Procurement, transport, delivery of all PV modules, inverters/charge controllers, batteries, mounting structures, cabling, and balance-of-system components.
- Supply of SCADA and monitoring systems
- Civil and structural works required for mounting and equipment housing.
- Construction of battery/inverter rooms
- Installation of solar PV arrays, battery energy storage systems, power conversion equipment, and internal electrical connections.
- Testing, commissioning, and performance verification of all systems. Training of designated facility personnel and handover of systems.



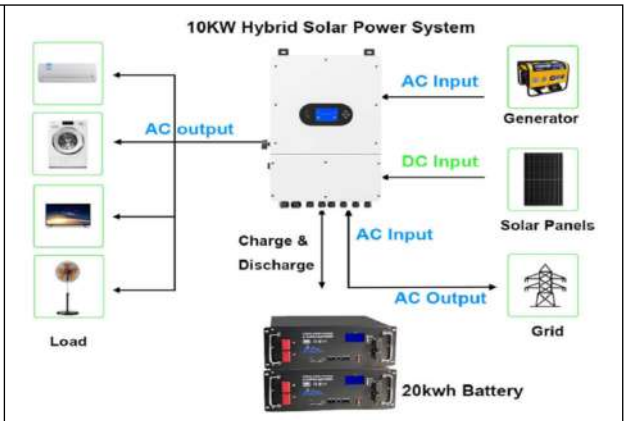


Fig-1 Proposed Hybrid Solar PV + BESS System Design Details

E.1. Technical Specifications and Scope of Supply – Hybrid SPV + BESS

The Contractor shall purchase, supply, install, test, and commission, and services to rectify any fault during defect and liability period for complete Hybrid Solar Photovoltaic (SPV) and Battery Energy Storage Systems (BESS) for designated facilities. The system shall be engineered to provide reliable, safe, and continuous power supply, integrating solar generation, battery storage, and auxiliary/grid input where applicable.

The scope shall include all equipment, materials, civil and electrical works, documentation, testing, training, and spare parts necessary for a fully functional and compliant system.

E.1.1. Solar Photovoltaic (PV) Module

The Contractor shall supply and install photovoltaic modules meeting the following minimum requirements:

- Type: Mono-crystalline silicon PV modules
- Minimum module efficiency: ≥ 20%
- Rated power tolerance: 0 to +5 Wp
- Nominal operating cell temperature (NOCT): As per IEC standards
- Maximum system voltage: ≥ 1,000 V DC (or system-appropriate)
- Module protection: IP67 or higher junction box
- Connector type: MC4 or approved equivalent
- Frame: Anodized aluminum alloy
- Glass: Tempered, anti-reflective coated

Each module shall be supplied with a minimum 10–12 years product warranty and 25 years linear performance warranty**.**

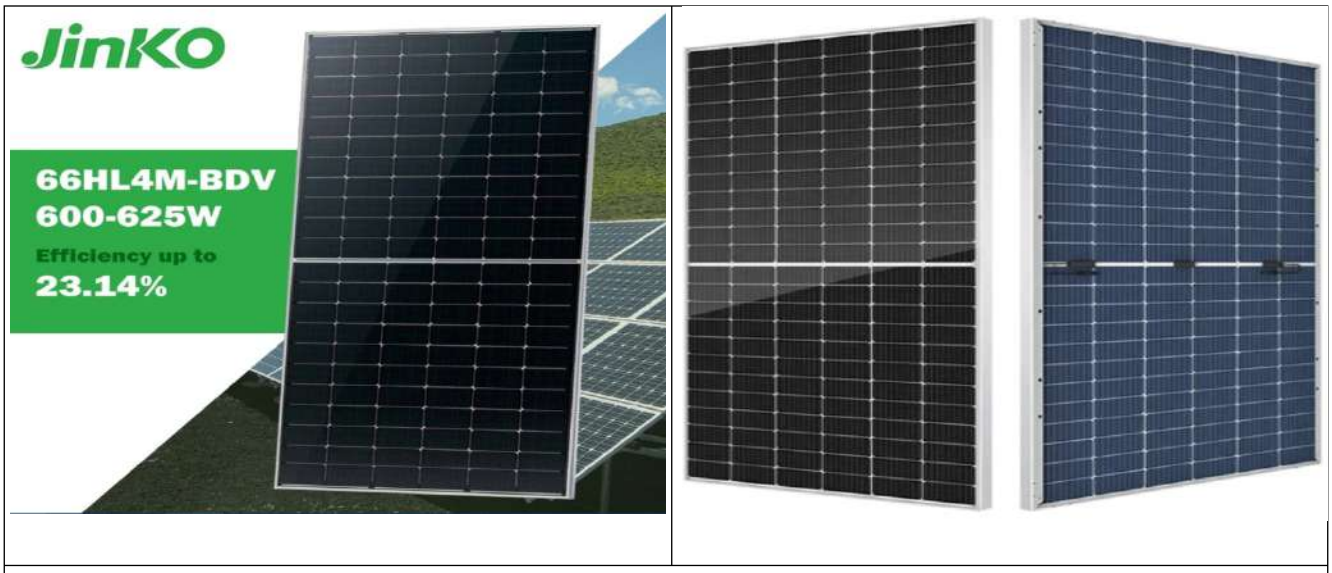


Fig-2 Proposed N-type mono crystalline solar panel Model.

E.1.2. Battery Energy Storage System (BESS)

The Battery Energy Storage System shall be designed to ensure safe, reliable, and long-life energy storage suitable for hybrid solar operation.

Minimum requirements:

- Battery chemistry: Lithium Iron Phosphate ($LiFePO_4$) or approved equivalent
- Nominal DC voltage: As per system design (e.g., 48 V, 96 V, or HV)
- Depth of Discharge (DoD): ≥ 80%
- Cycle life: ≥ 6,000 cycles at 80% DoD
- Integrated Battery Management System (BMS) with:
  - Over-voltage and under-voltage protection
  - Over-current protection
  - Temperature monitoring
  - Cell balancing
- Enclosure protection: IP20 minimum (indoor) / IP54 or higher (outdoor)
- Operating temperature range: Suitable for local climatic conditions

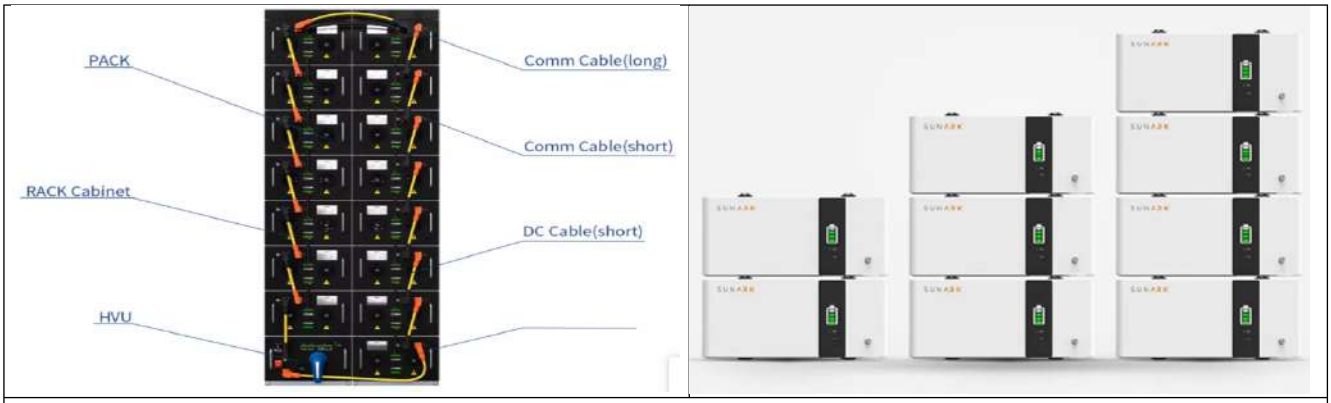


Fig-3 Proposed Lithium Iron Phosphate ($LiFePO_4$) BESS-Model

E.1.3. Hybrid Inverters, Power Conversion & Control Equipment

Hybrid Inverters shall manage power flow between PV arrays, batteries, loads, and auxiliary/grid sources.

Minimum requirements:

- Type: Three-phase or single-phase hybrid inverter (as per facility demand)
- Rated power: As defined in the BOQ
- Output voltage: 230 V single-phase / 400–415 V three-phase, 50 Hz
- Efficiency: ≥ 97%
- Integrated MPPT charge control
- Grid / generator interaction capability (where applicable)
- Anti-islanding protection
- Communication interfaces: RS485 / CAN / Ethernet / Wi-Fi
- Monitoring: Local display and remote monitoring capability

Fig-4 Proposed Hybrid Inverter Model

E.1.4. Solar Charge Controller (MPPT)

Where separate charge controllers are used, they shall meet the following minimum criteria:

- Type: MPPT (Maximum Power Point Tracking)
- DC input voltage: Compatible with PV array configuration
- Charging compatibility: $LiFePO_4$ batteries
- Protections:
  - Over-charge and over-discharge
  - Reverse polarity
  - Short circuit
- Efficiency: ≥ 98%
- Communication interface for integration with inverter/BMS

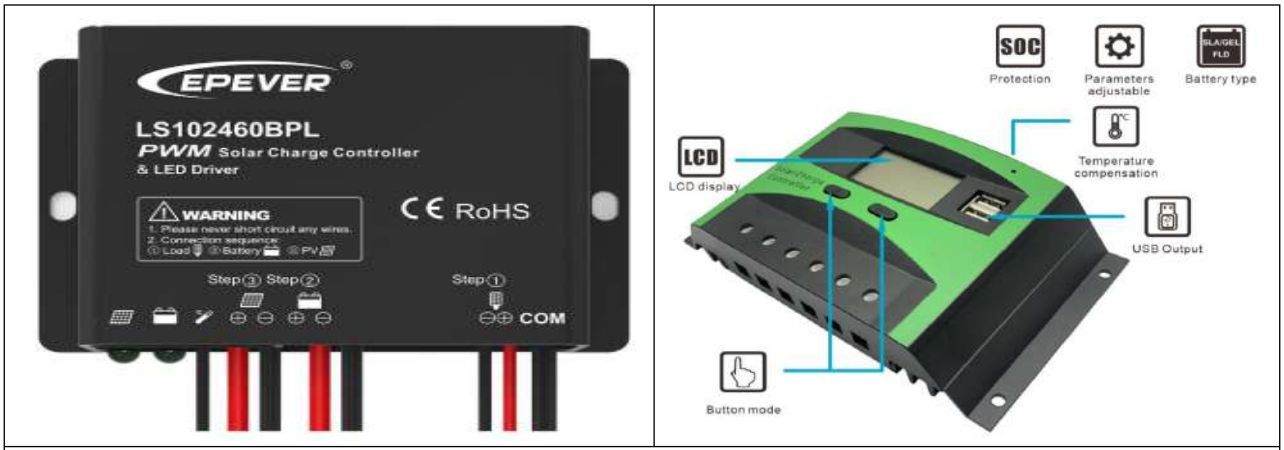


Fig-5 Proposed Charge Controller (MPPT) Model

E.1.5. Mechanical, Structural & Installation Standards

All mechanical and structural works shall ensure durability, safety, and long-term performance. Requirements include:

- PV mounting structures:
  - Hot-dip galvanized steel or aluminum
  - Designed for local wind loads
- Fasteners: Stainless steel or hot-dip galvanized
- Cable management:
  - UV-resistant conduits and trunking
  - Proper labeling and segregation
- Earthing and bonding:
  - Dedicated earth pits
  - DC and AC grounding as per IEC 60364
- Lightning and surge protection:
  - DC and AC SPDs
  - Proper bonding of metallic structures

Fig-6 Proposed Rooftop & Ground PV Mounting Structure Model

F. Monitoring and Evaluation

The Contractor shall implement monitoring and evaluation measures to ensure compliance with technical specifications, quality standards, safety requirements, and environmental safeguards.

F.1. Contractor Quality Control Plan (QCP)

The Contractor shall prepare and submit a project-specific Quality Control Plan (QCP) for approval prior to commencement of works. The QCP shall include, at a minimum:

- Quality management objectives and applicable standards.
- Organization chart and responsibilities of key personnel.
- Inspection and Test Plans (ITPs).
- Material submittal and approval procedures.
- Non-conformance, corrective action, and rework procedures.

F.2. Health, Safety & Security Plan (HSSP)

The Contractor shall develop and implement a Health, Safety, and Security Plan (HSSP) compliant with DT GLOBAL and local regulatory requirements. The HSSP shall address:

- Hazard identification and risk mitigation.
- Personal Protective Equipment (PPE) requirements.
- Site access control and security arrangements.
- Emergency response, incident reporting, and first-aid provisions.
- Safety induction and toolbox meetings.

F.3. Environmental Mitigation and Monitoring

Environmental mitigation and monitoring shall be conducted in accordance with the Environmental Mitigation and Monitoring Plan (EMMP). Measures shall include: - Waste segregation and approved disposal. - Dust, noise, and erosion control. - Protection of soil, surface water, and vegetation. - Periodic environmental monitoring and reporting.

G. Special Instructions

- All equipment, materials, and components supplied under the Contract shall be brand new, unused, of current manufacture, and fully compliant with the approved drawings, technical specifications, and applicable international standards. The use of refurbished, reconditioned, or second-hand materials shall not be permitted unless expressly approved in writing by the Engineer.
- All Works shall be executed by suitably qualified, trained, and experienced personnel, competent in the installation, testing, and commissioning of solar PV systems, battery energy storage systems, and associated electrical and civil works. The Contractor shall provide evidence of qualifications, certifications, and experience of key technical staff upon request.
- No deviation from the approved designs, drawings, materials, or specifications shall be made without the prior written approval of the Engineer. Any proposed changes shall be submitted with full technical justification, drawings, and impact assessment on cost, schedule, safety, and performance.
- The Contractor shall implement and maintain effective quality assurance and quality control procedures throughout the duration of the Works to ensure compliance with the Contract requirements and applicable standards.
- The Contractor shall ensure continuous coordination with relevant local authorities, utility providers, and facility management representatives to obtain necessary permits, approvals, inspections, and access, and to minimize disruption to ongoing operations.
- The Contractor shall ensure that all Works are carried out in compliance with health, safety, security, environmental, and social requirements, and shall take all necessary measures to protect personnel, the public, existing facilities, and the environment.

- All works shall be executed in a manner that ensures uninterrupted operation of existing facilities, where applicable, and any planned outages or interruptions shall be coordinated in advance and approved by the Engineer and facility management.

H. Deliverables

The Contractor shall provide, at a minimum, the following deliverables: -

- Approved QCP and HSSP documents.
- Detailed implementation schedule.
- Technical submittals and manufacturer datasheets.
- Testing and commissioning reports.
- Training materials and attendance records.
- As-built drawings and
- Operation & Maintenance (O&M) manuals.

I. Submittals

- All submittals shall be prepared, reviewed, and submitted in strict accordance with the approved Submittal Register and the requirements of the Contract. Submittals shall be provided in a timely manner to allow adequate review by the Engineer and shall not delay the progress of the Works.
- The Contractor shall submit, as applicable, shop drawings, design drawings, technical data sheets, catalogues, calculations, method statements, quality control documents, test procedures, certificates of compliance, warranties, operation and maintenance manuals, and material samples for review and approval prior to procurement, fabrication, delivery, or installation of the relevant works.
- Each submittal shall be clearly identified, referenced to the relevant Contract clauses, drawings, and specifications, and shall include the Contractor's formal review stamp confirming that the submittal has been checked for accuracy, completeness, and compliance with the Contract requirements.
- Submittals requiring revision shall be resubmitted promptly, incorporating all review comments. Approval or review by the Engineer shall not relieve the Contractor of responsibility for errors, omissions, or compliance with the Contract.
- No materials shall be ordered, delivered, or installed and no works shall proceed for any item requiring approval until the relevant submittals have been reviewed and accepted by the Engineer.
- Final submittals shall include as-built drawings, final test reports, warranties, certifications, and complete operation and maintenance documentation, which shall be submitted prior to provisional and final acceptance of the Works.

J. Period of Performance

- The Contractor shall commence the Works upon issuance of the Notice to Proceed (NTP) and shall complete all Works within the Contract Period as defined in the Contract Agreement. The Contractor shall carry out the Works in accordance with the approved project implementation schedule and shall achieve all contractual milestones, including installation, testing and commissioning, and handover, within the specified time.
- The Contractor shall submit a detailed work program and schedule within the time period specified in the Contract, showing sequencing of activities, key milestones, procurement lead times, submittals, inspections, testing and commissioning, and completion dates. The schedule shall be updated regularly to reflect actual progress and submitted to the Engineer for review.

- Any request for extension of time (EOT) shall be submitted in writing in accordance with the Contract, supported by full justification, impact analysis on the critical path, and evidence that the delay is beyond the Contractor's reasonable control. Extensions of time shall only be granted upon formal written approval by the Employer/Engineer.
- Failure to complete the Works within the Contract Period, except where an approved extension of time has been granted, may result in the application of liquidated damages or other contractual remedies as specified in the Contract.
- The Contractor shall take all reasonable measures to mitigate delays and shall coordinate closely with the Engineer and other stakeholders to ensure timely completion of the Works.

K. Anticipated Payment Schedule

- Payments shall be made in accordance with the milestone-based and/or percentage-of-completion payment schedule defined in the Contract and approved by the Employer. All payments shall be subject to verification and certification by the Engineer confirming that the relevant works, deliverables, or milestones have been satisfactorily completed in accordance with the Contract requirements.
- The Contractor shall submit interim payment invoices supported by detailed progress reports, certified measurements (where applicable), delivery notes, inspection and test records, and any other documentation required by the Engineer. Only works that have been completed, tested, and accepted shall be eligible for payment.
- **Advance payment**, if provided for under the Contract, shall be made against submission of an acceptable advance payment guarantee in the form and amount specified in the Contract. Recovery of the advance payment shall be made through proportional deductions from subsequent interim payments.
- **Interim payments** shall be linked to clearly defined milestones, which may include, but are not limited to: contract signing, mobilization, delivery of major equipment, completion of installation works, successful testing and commissioning, and provisional acceptance of the works.
- **Final payment** shall be made upon completion of all contractual obligations, including submission of as-built drawings, operation and maintenance manuals, warranties, test certificates, and completion of any outstanding works or defects, and upon issuance of the Final Acceptance Certificate by the Engineer.
- The Engineer reserves the right to withhold or adjust payments for incomplete, non-conforming, or defective works until such issues are satisfactorily rectified, in accordance with the Contract. All payments shall be made in the currency and within the time periods specified in the Contract.

L. Coordination

- The Contractor shall attend a mandatory Pre-Construction Conference with DT GLOBAL SINAAN prior to commencement of any works. The purpose of the meeting shall be to formally agree on the Start Date, overall project implementation schedule, key milestones, and coordination arrangements, and to review and finalize the schedule for submittals, Quality Control Plan (QCP), Health, Safety and Security Plan (HSSP), Environmental and Monitoring Management Plan (EMMP), and site security arrangements.
- During the pre-construction phase, the Contractor shall present and discuss the method statements**,** staffing and mobilization plan**,** procurement and delivery schedules, and communication and reporting procedures**,** and shall address any comments or requirements issued by DT GLOBAL SINAAN prior to the start of construction.

- Throughout the construction period, the Contractor's Construction Coordinator (CC) shall maintain at all times a complete and up-to-date set of project documents at the site office, including but not limited to:
    - The approved Scope of Work (SOW)
    - Approved Drawings and As-Built Drawings
    - Technical Specifications
    - Approved Quality Control Plan (QCP)
    - Health, Safety and Security Plan (HSSP)
    - Environmental and Monitoring Management Plan (EMMP)
    - Environmental and Social Monitoring Checklists
    - Approved method statements, permits, and inspection records

- The Contractor shall ensure effective coordination with DT GLOBAL SINAAN, local authorities, and other stakeholders, and shall participate in regular coordination and progress meetings as required. Any changes to the approved schedule, plans, or construction methodology shall be submitted in writing for review and approval prior to implementation.
- Failure to comply with coordination, documentation, or meeting requirements may result in suspension of works until compliance is achieved, at no additional cost to the Employer.

M. Applicable Codes and Standards

All design, supply, installation, testing, commissioning, and operation and maintenance works shall comply with the latest editions of the following standards, codes, and guidelines. Where conflicts arise, the more stringent requirement shall apply, subject to approval by the Engineer.

M.1 General and Electrical Standards

- IEC 60364 – Low-voltage electrical installations
- IEC 61439 – Low-voltage switchgear and control gear assemblies
- IEC 60529 – Degrees of protection provided by enclosures (IP Code)
- IEC 60204-1 – Safety of machinery – Electrical equipment of machines
- IEC 61000 series – Electromagnetic compatibility (EMC)
- IEEE 519 – Harmonic control in electrical power systems
- IEEE 3007 series – Recommended practices for industrial and commercial power systems

M.2 Solar Photovoltaic (PV) Systems

- IEC 61215 – Design qualification and type approval of crystalline silicon PV modules
- IEC 61730 – PV module safety qualification
- IEC 62548 – Design requirements for photovoltaic (PV) arrays
- IEC 62446-1 – Grid-connected PV systems – Documentation, commissioning tests, and inspection
- IEC 61724-1 – Photovoltaic system performance monitoring
- IEC 62852 – Connectors for DC application in PV systems
- IEC 62930 – Electric cables for photovoltaic systems

M.3 Hybrid Inverters, Power Conversion & Control Equipment

- IEC 62109-1 / IEC 62109-2 – Safety of power converters for use in PV power systems
- IEC 61683 – Measurement of efficiency of power conditioners
- IEC 62040 series – Uninterruptible Power Supply (UPS) systems (where applicable)

M.4 Battery Energy Storage Systems (BESS)

- IEC 62619 – Safety requirements for secondary lithium batteries for industrial applications

- IEC 63056 – Safety requirements for lithium battery systems
- IEC 61427-1 / IEC 61427-2 – Secondary batteries for renewable energy storage
- UN 38.3 – Transport of lithium batteries
- UL 1973 – Batteries for stationary applications (accepted equivalent)

M.5 Earthing, Lightning Protection & Surge Protection

- IEC 60364-5-54 – Earthing arrangements and protective conductors
- IEC 62305 series – Protection against lightning
- IEC 61643-11 – Surge protective devices (SPDs) for low-voltage systems

M.6 Mechanical, Structural & Installation Standards

- ISO 1461 – Hot-dip galvanized coatings on fabricated iron and steel articles
- ISO 12944 – Corrosion protection of steel structures by protective paint systems
- IEC 62790 – Junction boxes for photovoltaic modules
- ASCE 7 – Minimum design loads for buildings and structures (wind load reference, where applicable)

M.7 Health, Safety, Security & Environment

- ILO Occupational Safety and Health Convention
- ISO 45001 – Occupational health and safety management systems
- ISO 14001 – Environmental management systems
- DT GLOBAL Health, Safety & Security Plan (HSSP) Requirements
- DT GLOBAL Environmental Mitigation and Monitoring Plan (EMMP)

M.8 Quality Management

- ISO 9001 – Quality management systems
- Manufacturer's certified installation manuals and technical guidelines

M.9 Local Regulations and Authority Requirements

- Applicable Somaliland national and regional electrical regulations, where available
- Local authority permitting and inspection requirements
- Utility interconnection requirements (if hybrid or grid-interactive systems are applicable)

N. Bill of Quantity (BOQ)

Attached as Excel file

Quantities indicated are minimum mandatory requirements.
Prices represent the Engineer's Cost Estimate for evaluation purposes.
All tools shall be new, unused, and of recognized international manufacture.
Maintenance kits shall be delivered prior to system commissioning.
Contractor shall provide manufacturer datasheets and warranty certificates

O. Defect and Liability Period - Hybrid SPV + BESS

O.1 Definition and Duration

The Defects Liability Period (DLP), shall be a period of six (6) months commencing from the date of issuance of the Taking-Over Certificate (TOC) for the Works or any part thereof.

During the DLP, the Contractor shall remain fully responsible for the performance, integrity, and compliance of the Works and shall rectify, at no additional cost to the Employer, any defects, deficiencies, or failures arising from design, materials, workmanship, installation, or non-compliance with the Contract.

O.2 Scope of Contractor Responsibilities during DLP

During the DLP, the Contractor shall provide full Operation and Maintenance (O&M) services for the Solar PV plant and all associated systems, including but not limited to:

- Solar PV modules, mounting structures, and DC cabling;
- Inverters, inverter-chargers, power conditioning units, and protection systems;
- Battery Energy Storage System (BESS), including batteries, BMS, enclosures, HVAC, and fire safety systems;
- Monitoring, control, and data acquisition systems (SCADA/EMS);
- Earthing, lightning protection, and auxiliary electrical systems.

All services during the DNP/DLP shall be performed entirely at the Contractor's cost and in accordance with Good Industry Practice, manufacturer recommendations, and applicable standards.

O.3 Defect Identification and Rectification

Any defect, fault, or deficiency identified during the DLP, whether:

- Discovered by the Employer, Engineer, or Contractor; or
- Arising from system monitoring, inspections, or operation, shall be promptly notified to the Contractor.

The Contractor shall:

- Acknowledge receipt of the defect notification within twenty-four (24) hours;
- Commence corrective action immediately for critical defects;
- Rectify all defects within a timeframe approved by the Engineer.
- All rectification works shall be completed without disruption to facility operations to the maximum extent practicable.

O.4 Preventive Maintenance and Inspections

The Contractor shall implement a Preventive Maintenance Program throughout the DLP, including:

- Routine inspections and system health checks;

- Preventive maintenance of PV, inverter, and BESS systems;
- Verification of protection settings, alarms, and control logic;
- Regular cleaning and mechanical inspections of PV modules and structures.

The Preventive Maintenance Program shall be documented and made available to the Engineer upon request.

O.5 Performance Standards during DNP/DLP

During the DNP/DLP, the Contractor shall ensure:

- System availability of not less than 95%**;**
- Continuous operation of monitoring and data acquisition systems;
- Proper battery management, including SOC control, thermal management, and protection coordination;
- Compliance with all ESSH, ESMP, and HSSP requirements.

Failure to meet these performance standards may result in corrective actions, withholding of retention, or performance deductions**,** in accordance with the Contract.

O.6 Reporting Requirements

The Contractor shall submit monthly DLP reports to the Engineer, including:

- System performance and availability;
- Summary of defects identified and rectified;
- Preventive and corrective maintenance activities;
- Energy production and battery performance data;
- ESSH compliance and incident reporting.

O.7 Retention Money during DLP

The Employer shall retain ten percent (10%) of the Accepted Contract Amount as Retention Money to secure the Contractor's obligations during the DLP.

The Retention Money shall remain valid throughout the full DLP period and shall serve as security for:

- Rectification of defects;
- Compliance with performance requirements;
- Completion of all DNP/DLP obligations.

O.8 Release of Retention Money

The Retention Money shall be released after completion of the DLP, subject to fulfillment of all the following conditions:

- Successful expiry of the six (6)-month DLP;

- Rectification of all notified defects to the satisfaction of the Engineer;
- Submission of all required DLP reports and records;
- Issuance of the Performance Certificate by the Employer's Representative.

Note: Partial or delayed release may be applied if outstanding defects or non-compliances remain unresolved.

O.9 Extension of DLP

If any defect remains outstanding at the end of the DLP, the Engineer may:

- Instruct the Contractor to remedy such defect within a specified period; and/or
- Extend the DLP for the affected part of the Works until satisfactory rectification is achieved.

O.10 Failure to Remedy Defects

If the Contractor fails to remedy any defect within the specified time:

- The Employer may arrange for the defect to be rectified by others at the Contractor's risk and cost; and
- Such costs may be recovered from the Retention Money or deducted from any sums due to the Contractor.

O.11 Completion of DNP/DLP

Upon satisfactory completion of the DNP/DLP and fulfillment of all obligations, the Employer's Representative shall issue the Performance Certificate, marking the end of the Contractor's liability under the DNP/DLP and triggering the release of Retention Money, in accordance with the Contract.

ANNEX 2 - DESIGNS AND DRAWINGS

PV SOLAR SYSTEM FOR MCH 26 JUNE WAJAALE

NOTES

GENERAL

1. Install solar PV system in accordance with IEC/NEC standards and approved drawings.
2. PV modules to face true south with optimized tilt angle; maintain spacing to avoid shading.
3. Mounting structure to be high-strength anodized / galvanized aluminum, corrosion-resistant and suitable for outdoor use.
4. All bolts, nuts, and fasteners to be stainless steel and securely tightened.
5. Aluminum structure to be fixed on reinforced concrete bases (min. C20/25), sized to suit soil and wind loads.
6. Concrete foundations to be properly aligned, cured, and raised above ground to prevent water damage.
7. Structure designed to withstand local wind loads (≥120 km/h or site-specific requirement).
8. Mounting frames and panels to be bonded and earthed; earthing resistance to meet electrical standards.
9. DC cables to be neatly routed, UV-protected, and secured to the structure.
10. Provide safe access for cleaning, inspection, and maintenance.
11. Installation to be inspected, tested, and handed over in safe, fully operational condition.

No.	Description	Date

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SINAAN

Battery and Inverter Room for MCH 26 JUNE

Project number 001	**A100**
Date DEC 2025	
Drawn by	
Checked by	Scale

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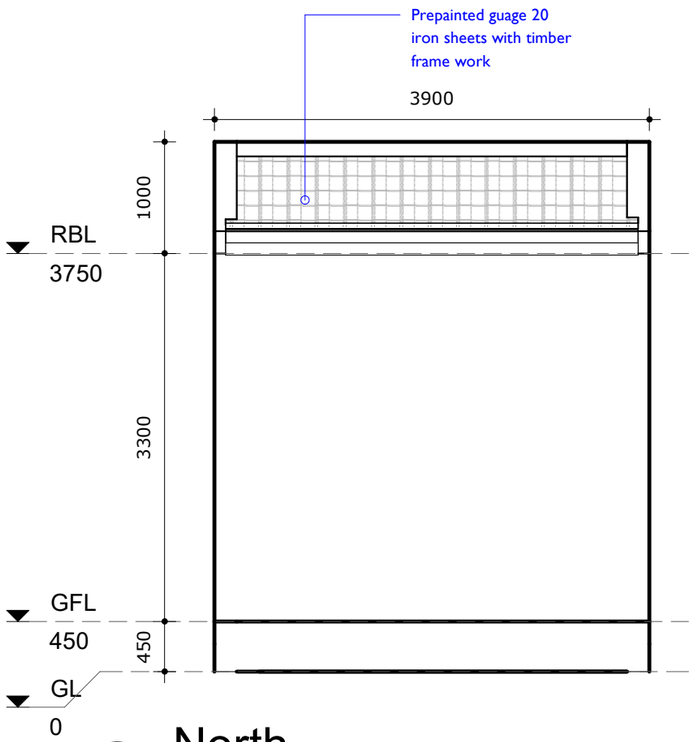

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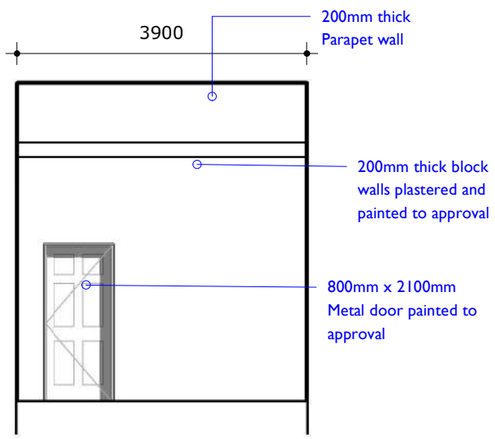

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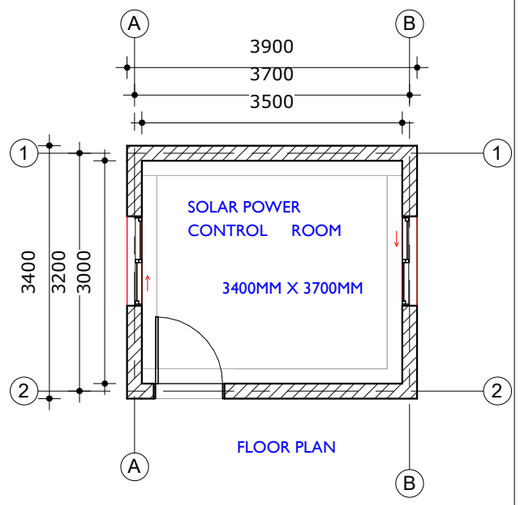

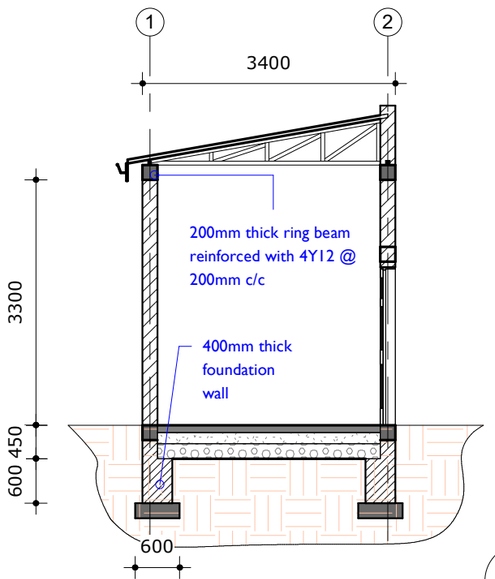

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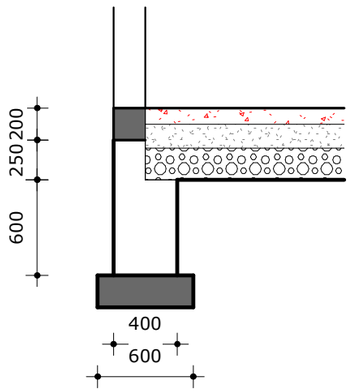

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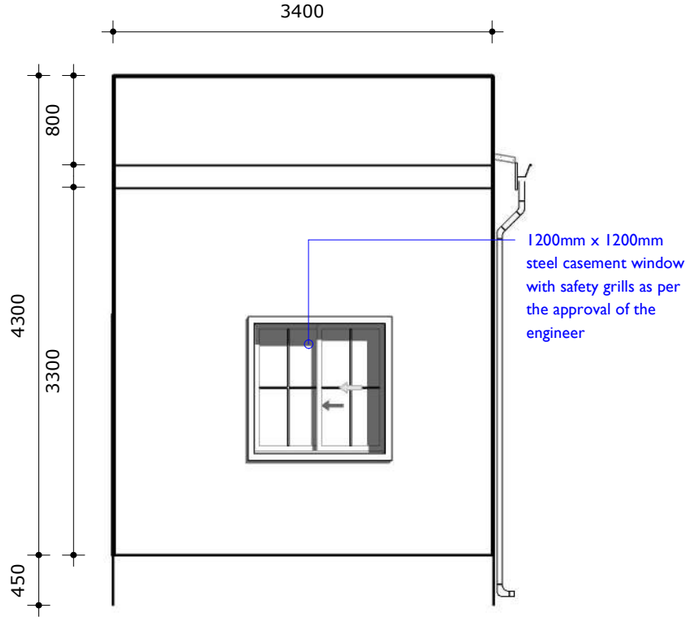

5 East
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NOTES

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No.	Description	Date

UK International Development
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SINAAN

Battery and Inverter Room for MCH
26 JUNE

Project number	001		A101
Date	DEC 2025		
Drawn by	Author		
Checked by	Checker	Scale	As indicated

ANNEX 3 - QUALITY ASSURANCE PLAN

Submit a Detailed Proposed Quality Assurance Plan. Below is a guide.

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QUALITY ASSURANCE/QUALITY CONTROL PLAN FOR PHOTOVOLTAIC (PV) SYSTEM INSTALLATION

Contents

QUALITY ASSURANCE/QUALITY CONTROL PLAN FOR PHOTOVOLTAIC (PV) SYSTEM INSTALLATION

1. Introduction

This Quality Assurance / Quality Control (QA/QC) Plan defines the procedures, responsibilities, inspections, tests, documentation, and acceptance criteria to ensure that the Solar PV system is installed in full compliance with approved designs, technical specifications, applicable codes and standards, manufacturer requirements, and contractual obligations.

The plan applies to all phases of the project including procurement, delivery, installation, testing, commissioning, and handover.

2. Objectives

The objective of this Quality Assurance and Quality Control document is to:

- Ensure installation quality, safety, and long-term system reliability
- Prevent defects, rework, and performance losses
- Verify compliance with approved drawings, specifications, and codes
- Establish clear inspection, testing, and documentation requirements
- Provide traceability and accountability throughout the project lifecycle

3. Applicable Standards and Codes

The project shall comply with, but not be limited to, the following standards:

Ref. No.	Component / System	Minimum Technical Requirement	Applicable Standard
1	Overall System Design	Hybrid SPV + BESS system sized as per BoQ and facility load demand	IEC / IEEE
2	Solar PV Modules	Mono-crystalline, ≥20% efficiency	IEC 61215 / IEC 61730
3	PV Module Warranty	≥10–12 years product, ≥25 years performance	Manufacturer
4	PV Connectors	MC4 or approved equivalent	IEC 62852
5	PV DC Cables	UV-resistant, PV-rated	IEC 62930
6	Battery Chemistry	$LiFePO_4$ (Lithium Iron Phosphate)	IEC 62619
7	Battery Cycle Life	≥6,000 cycles @ ≥80% DoD	IEC 61427
8	Battery Management System	Integrated BMS with protection & balancing	IEC 63056
9	Battery Enclosure	IP-rated, suitable for indoor/outdoor installation	IEC 60529

10	Hybrid Inverter Type	Hybrid (PV + Battery + Grid/Generator)	IEC 62109
11	Inverter Efficiency	≥97%	IEC 61683
12	Output Voltage & Frequency	230 V / 400–415 V, 50 Hz	IEC 60038
13	Anti-Islanding Protection	Mandatory	IEC 62116
14	Monitoring System	Local display + remote monitoring	IEC 61724
15	Solar Charge Controller	MPPT, $LiFePO_4$ compatible	IEC 62509
16	Earthing System	Dedicated earth pits, DC & AC grounding	IEC 60364-5-54
17	Surge Protection Devices	DC & AC SPDs installed	IEC 61643-11
18	Lightning Protection	System bonding & protection	IEC 62305
19	Mounting Structures	Hot-dip galvanized / aluminum	ISO 1461
20	Cable Management	UV-resistant conduits & labeling	IEC 60364
21	Installation Workmanship	Qualified & certified personnel	DT GLOBAL
22	Quality Control Plan (QCP)	Project-specific QCP submitted	DT GLOBAL
23	Health, Safety & Security Plan (HSSP)	HSSP submitted and approved	DT GLOBAL
24	Environmental Compliance	EMMP measures implemented	ISO 14001
25	Mandatory Spare Parts	Supplied as per BOQ	Contract
26	O&M Tools Kit	Supplied as per BOQ	Contract
27	O&M Manuals	Complete manuals provided	IEC 62446
28	Training	Operator & maintenance training provided	Contract
29	Testing & Commissioning	Full testing reports submitted	IEC 62446
30	Warranty & Support	Warranty certificates & service support	Contract

4. Roles and Responsibilities

4.1 Project Manager

The Project Manager will be responsible for:

- Overall responsibility for QA/QC implementation
- Ensure resources and trained personnel are available
- Approve corrective actions

4.2 Site Engineer / Supervisor

The Site Engineer will be responsible for

- Implement and monitor this QA/QC plan
- Prepare inspection and test plans (ITPs)
- Conduct inspections and witness tests
- Ensure installation follows approved drawings and method statements
- Maintain QA/QC records and reports
- Request inspections and tests at hold points
- Rectify non-conformances

4.3 Electrical Engineer

The Electrical Engineer will be responsible for

- Verify electrical design compliance
- Supervise DC and AC installation works
- Review test results and commissioning data

4.4 Installer / Technician

The Installer / Technician will be responsible for

- Perform installation as per approved procedures
- Use calibrated tools and approved materials
- Report defects or deviations immediately

5. QA/QC Control Stages

Quality control for the PV system shall be implemented through structured control stages. Each stage includes defined activities, inspection points, responsibilities, and acceptance criteria to ensure defects are prevented rather than corrected at later stages.

The main QA/QC control stages are:

1. Design and Submittal Review
2. Material Procurement and Delivery Inspection
3. Installation Quality Control
4. Testing and Commissioning
5. Final Inspection and Handover

5.1 Design and Submittal Review

The Design and Submittal Review stage ensures that the proposed PV system design is technically sound, code-compliant, and suitable for site conditions before procurement and construction begin.

Key activities include:

- Review of PV layout drawings, single-line diagrams, string sizing, and inverter configuration
- Verification of compliance with applicable IEC/IEEE standards, utility grid codes, and local regulations
- Confirmation that selected equipment (modules, inverters, protection devices) is compatible and appropriately rated
- Review of earthing, lightning protection, and protection coordination schemes
- Approval of datasheets, method statements, and installation procedures

No procurement or installation work shall commence until all design documents and technical submittals are reviewed, commented on, and formally approved.

5.2 Material Procurement and Delivery Inspection

This stage ensures that all equipment and materials supplied to the project meet the approved technical specifications and quality requirements.

Key activities include:

- Verification that procurement is based strictly on approved submittals and manufacturer datasheets
- Inspection of materials upon delivery for quantity, model, rating, certification, and physical condition
- Checking serial numbers of PV modules and inverters for traceability and warranty purposes
- Ensuring materials are accompanied by test certificates, conformity certificates, and warranties
- Proper storage and handling of materials to prevent damage, deterioration, or loss

Any damaged, non-compliant, or unapproved materials shall be rejected, quarantined, and reported through a Material Inspection Report (MIR).

5.3 Installation Quality Control

Installation Quality Control focuses on ensuring that all mechanical and electrical works are executed in accordance with approved drawings, method statements, manufacturer instructions, and safety standards.

Key activities include:

- Continuous site supervision by qualified engineers and supervisors
- Inspection of mounting structures, alignment, anchoring, and module installation
- Verification of DC string configuration, cable routing, labeling, and connector installation
- Inspection of inverter installation, AC cabling, protection devices, and grid interface
- Verification of earthing and bonding of all metallic and electrical components

Hold points and witness points shall be defined, and no subsequent activity shall proceed without QA/QC approval of completed works.

5.4 Testing and Commissioning

The Testing and Commissioning stage verifies that the installed PV system is electrically safe, performs as designed, and operates reliably under normal conditions.

Key activities include:

- Pre-commissioning inspections and electrical tests in accordance with IEC 62446
- DC-side tests including polarity, continuity, insulation resistance, and string voltage checks
- AC-side tests including protection device verification and inverter functional checks
- Inverter start-up, grid synchronization, and performance verification
- Verification of monitoring, data logging, and communication systems

All test results shall be recorded, reviewed, and approved prior to energization of the system.

5.5 Final Inspection and Handover

Final Inspection and Handover confirm that the PV system has been completed in accordance with contractual requirements and is ready for commercial operation.

Key activities include:

- Joint final inspection with the Client/Engineer to verify workmanship and system completeness
- Confirmation that all punch list items and non-conformances have been closed
- Submission and approval of as-built drawings, test reports, warranties, and O&M manuals
- Training of the Client's operation and maintenance personnel
- Formal handover and issuance of completion and acceptance certificates

Upon successful handover, the system shall enter the warranty and defects liability period.

6. Design and Submittal QA

6.1 Document Review

- Approved single-line diagrams (SLD)
- Layout drawings and string configuration
- Earthing and lightning protection drawings
- Cable sizing and protection calculations

6.2 Verification Criteria

- Compliance with codes and standards
- Compatibility of modules, inverters, and BOS
- Adequate safety margins and protection devices

7. Material Inspection and Control

7.1 Incoming Material Inspection

Item	Inspection Criteria	Acceptance	Record

PV Modules	Model, wattage, serial numbers, visual defects	As per datasheet	Material Inspection Request
Inverters	Rating, certifications, accessories	Approved submittal	Material Inspection Request
Mounting Structures	Material, coating, dimensions	Approved drawings	Material Inspection Request
DC/AC Cables	Type, size, insulation rating	IEC compliant	Material Inspection Request
Protection Devices	Ratings, make, model	Approved submittal	Material Inspection Request

7.2 Storage and Handling

- Modules stored upright, covered, and protected from impact
- Inverters stored in dry, ventilated areas
- Cables stored on drums, protected from sunlight and moisture

8. Installation QA/QC Requirements

8.1 Mechanical Installation

Activity	Inspection Point	Acceptance Criteria
Structure alignment	Level and orientation	±2° tolerance
Anchoring	Bolt torque, embedment	As per manufacturer
Module mounting	Clamp position, torque	Manufacturer limits
Tilt & azimuth	As per approved layout	±2° deviation

8.2 DC Electrical Works

Activity	Inspection Point	Acceptance Criteria
String configuration	Correct series/parallel	Approved SLD
Cable routing	Proper support & protection	IEC 62548
MC4 connectors	Crimp quality & locking	Manufacturer specs
Polarity	Correct polarity	Zero reverse polarity

8.3 AC Electrical Works

Activity	Inspection Point	Acceptance Criteria
Inverter installation	Clearance & ventilation	Manufacturer manual
AC cabling	Size, labeling, routing	Approved drawings

Protection devices	MCB/MCCB/RCBO ratings	Design compliant
Grid interface	Synchronization settings	Utility code

8.4 Earthing and Lightning Protection

- Earth resistance ≤ design requirement (typically ≤5 ohms)
- All metallic parts bonded
- Separate DC and AC earthing where required

9. Inspection and Test Plan (ITP)

9.1 Pre-Commissioning Tests

Test	Method	Acceptance Criteria
Visual inspection	IEC 62446 checklist	No defects
Continuity test	Multimeter	Continuity OK
Polarity test	Multimeter	Correct polarity
Insulation resistance	Megger (500–1000V)	≥1 MΩ
String voltage	Multimeter	±5% design

9.2 Commissioning Tests

Test	Acceptance Criteria
Inverter start-up	No alarms
Grid synchronization	Stable operation
Power output	Within expected range
Monitoring system	Data visible & accurate

10. Non-Conformance Management

In case of Non-Conformance:

- Non-Conformance Reports (NCR) will be issued for deviations
- Root cause analysis will be conducted
- Corrective and preventive actions will be implemented
- Re-inspection and closure documented

11. Calibration and Tools Control

- All test instruments must have valid calibration certificates
- Calibration records maintained on site
- Damaged or expired tools removed from service

12. Documentation and Records

Comprehensive and accurate documentation is essential to demonstrate compliance with QA/QC requirements and to support operation, maintenance, and warranty claims throughout the system life.

The following QA/QC records shall be maintained, controlled, and submitted as part of the project QA/QC dossier:

- Approved design drawings, specifications, and revisions
- Approved technical submittals and datasheets for all equipment
- Material Inspection Reports (MIR) and delivery notes
- Site inspection checklists for mechanical, DC, AC, and earthing works
- Inspection and Test Plans (ITPs) and completed test records
- Pre-commissioning and commissioning test reports
- Calibration certificates for testing instruments
- Non-Conformance Reports (NCR), corrective and preventive action records
- As-built drawings reflecting actual installation
- Operation & Maintenance (O&M) manuals
- Equipment warranties, guarantees, and certificates of conformity
- Training records and handover certificates

All documents shall be properly indexed, version-controlled, and retained for the duration of the warranty and defects liability period, or as required by contract and regulatory authorities.

13. Training and Competency

- Installers trained by certified PV professionals
- Electrical works carried out by licensed electricians
- Toolbox talks conducted regularly

14. Final Inspection and Handover

- Completion of all inspections and tests
- Submission of QA/QC dossier
- Client/Engineer final walkthrough
- Issuance of completion certificate

ANNEX 4 - ENVIRONMENTAL MITIGATION REQUIREMENTS

S/No	Project Stage and Activity	Potential for Negative Impacts	Mitigation Action for the Negative Impacts
1.	**Implementation**		
1.1	Demolition of existing failed structures, and carting away surplus materials	Avoid adjacent building, and damaging or destroying sensitive terrestrial ecosystems in the course of site	Develop plan to reduce and minimize impacts of falling objects and native flora during construction from damaging inhabitants, ecosystems and labors. Remove large objects without destroying. Cart away surplus debris and other hazardous materials to recommended proper damp sites.
1.2	Site clearing and/ or leveling, and construction stake out	Disturbing natural flow of accumulation of watershed of the land topography and property line	Minimize disturbance of native flora during construction. Remove, without destroying, large
1.3	Drainage	Cause erosion, siltation, changes in natural water flow, and/or damage to aquatic ecosystems when excavated soil is piled inappropriately. Expose inhabitants and crew to risk of falls and injuries in excavation pits.	• Install drainage structure during construction • Putting operation and maintenance program into effect to prevent and mitigate environmental impacts • Factor climate change scenario • Clearly define the type of the drainage purposing, ditches or self-drainage to control surface water drainage system • Extend run out drains for enough to allow water to dissipate evenly into ground. • Add Gutters to roofs. • Clean and Extend volume of Septic tanks.

1.4	Cladding of the structures	Possibility of contamination of soil and ground water by Ferrous (III) Oxide when rain water falls and drains on rusted iron sheets	The design and specifications binding with BoQ will recommend the use of pre-painted iron sheets to avoid rust. The site supervisors will ensure that the iron sheets delivered for the works are pre-painted and the correct gauge. No Painting at all
2	**Operation**		
1.1	Dust	Pollution of surface or ground water due to dust	Water trucks for reducing dust during rehab of roads
1.2	Concrete Mixing	Hardening of extra concrete after every stage of concrete mixing.	Site supervisors should make sure to be cleaned and removed extra concretes after mixing and casting is completed.

Environmental Monitoring and Mitigation Plan (EMMP)

Purchase, Supply, Installation, Testing, Commissioning of Hybrid Solar PV & BESS in Wajaale, Somaliland

Contents

Environmental Monitoring and Mitigation Plan (EMMP)

Solar Power Project – Wajaale, Somaliland

1. Project Overview

- **Project type:** Purchase, Supply, Installation, Testing, Commissioning of Hybrid Solar PV & BESS
- **Capacity and Locations:** Wajaale, Somaliland

Facility Name		Coordinate Point	
	Capacity	Latitude	Longitude
Wajaale Municipality	25 kWp	9°36'35.31"N	43°20'44.01"E
Wajaale Main Hospital	25 kWp	9°37'0.49"N	43°20'31.25"E
Wajaale MCH (Central)	15 kWp	9°36'8.61"N	43°20'10.44"E
Wajaale MCH – 26 June	15 kWp	9°35'55.90"N	43°20'50.42"E
Wajaale Immigration Point	15 kWp	9°37'50.35"N	43°21'52.18"E
Wajaale Women's Market (West)	15 kWp	9°36'32.18"N	43°19'44.90"E

- **Project Phases:**
  - Pre-construction & Site Preparation
  - Construction & Installation
  - Commissioning
  - Operation & Maintenance (O&M)
  - Decommissioning

2. Applicable Environmental & Social Objectives

Purpose of the EMMP

The purpose of this EMMP is to

- Prevent or minimize adverse environmental impacts
- Build monitoring protocols for key risks
- Ensure legal compliance with Somaliland environmental regulations and international standards
- Protect community health, land, water, wildlife, and cultural sites

3. Potential Environmental & Social Impacts

Below are potential identified Environmental & Social Impacts at different phases of project

Pre-Construction

- Site selection and layout design may impact on sensitive habitats, land use conflicts.

- Land acquisition and access may generate Land disputes or loss of livelihoods.

Construction Phase

- Soil erosion and dust generation
- Noise and vibration
- Disturbance to local vegetation and wildlife
- Waste generation (scrap metal, plastics, packaging)
- Community disturbance and traffic impacts

Operation Phase

- Land use change and habitat fragmentation
- Water contamination risks
- Waste from panel maintenance (e.g., broken glass)

Decommissioning Phase

- Soil disturbance
- Waste disposal challenges
- Restoration of site

4. Environmental Monitoring Program (EMP)

A. Parameters to Monitor

Project Phase	Activity	Potential Environmental / Social Impact	Implementation Responsibility	Supervision / Monitoring Responsibility
Pre-Construction	Site selection and layout design	Impacts on sensitive habitats, land use conflicts	Project Owner / Design Consultant	Environmental Consultant / PIU
	Land acquisition and access	Land disputes, loss of livelihoods	Project Owner	PIU / Local Authority
Construction	Site clearing and earthworks	Vegetation loss, soil erosion	Contractor	Supervision Engineer / PIU
	Excavation and trenching	Soil erosion, sediment runoff	Contractor	Supervision Engineer
	Material transport and site traffic	Dust emissions, nuisance to communities	Contractor	Supervision Engineer
	Construction machinery and equipment	Noise and vibration impacts	Contractor	Supervision Engineer
	Construction waste generation	Soil and visual pollution	Contractor	PIU / Environmental Officer
	Fuel and oil storage	Soil and water contamination	Contractor	PIU / Supervision Engineer

	Electrical and working-at-height activities	Worker accidents and injuries	Contractor	PIU / HSE Officer
Operation	PV system operation	Glare and visual impacts	Operator	PIU
	Routine maintenance	Waste from damaged panels	Operator	PIU
	Electrical systems	Fire and safety risks	Operator	PIU
	Stormwater management	Localized flooding or erosion	Operator	PIU
Decommissioning	Decommissioning and Demobilization	Waste generation, land degradation	Project Owner	PIU / Environmental Authority

5. Environmental Mitigation Measures

A. Pre-Construction & Site Preparation

- **Site Assessment:**
  - Survey for sensitive habitats, wells, cultural sites
  - Adjust layout to avoid critical features
- **Erosion Control:**
  - Install silt fences, sediment traps
  - Stabilize slopes and bare soil areas

B. During Construction

Impact	Mitigation
Vegetation loss, soil erosion	▪ Limit clearing to approved areas ▪ Mark no-go zones ▪ Restore disturbed areas after works
Soil erosion, sediment runoff	▪ Install erosion and sediment control (berms, silt fences) ▪ Avoid works during heavy rains
Dust emissions, nuisance to communities	▪ Water spraying on access roads ▪ Cover transported materials ▪ Enforce speed limits
Noise and vibration impacts	▪ Restrict high-noise activities to daytime ▪ Maintain equipment ▪ Provide PPE to workers
Soil and visual pollution	▪ Prepare Waste Management Plan ▪ Segregate recyclable waste ▪ Dispose at approved sites
Soil and water contamination due to fuel spillage	▪ Store fuel in bunded areas ▪ Spill kits available onsite ▪ Train staff in spill response

Community traffic issues	▪ Traffic management plan ▪ signage ▪ schedule deliveries during off-peak hours
Worker accidents and injuries	▪ Implement OHS Plan ▪ Provide PPE ▪ Toolbox talks ▪ Emergency response plan

C. During Operation

Impact	Mitigation
Glare and visual impacts from PV Panels	▪ Use anti-reflective PV modules ▪ Maintain buffer distances
Waste from damaged panels	▪ Store damaged panels safely ▪ Recycle through approved recyclers
Fire and safety risks	▪ Install fire protection systems ▪ Routine inspections and maintenance
Localized flooding or erosion	▪ Maintain drainage channels ▪ Inspect after heavy rains
Access Control	▪ Fencing and signage to prevent unauthorized entry

D. Decommissioning

Impact	Mitigation
Waste generation, land degradation	▪ Recycle metal frames, wiring, inverters ▪ Recycle panels, metals, cables ▪ Re-vegetation with native species ▪ Manage as per national waste standards

6. Roles & Responsibilities

Role	Responsibility
Project Owner	Overall EMMP compliance and reporting
SINAAN Site Engineer	Day-to-day monitoring, record keeping, reporting
Site Contractor	Implement mitigation, maintain logs, train workers
Local Community Liaison	Communicate concerns, feedback mechanism

7. Reporting & Documentation

Monitoring Reports

- **Weekly Reports (Construction):**

    - Dust, noise, waste, complaints, corrective actions
- **Monthly Reports:**
    - Consolidated tracking of indicators
    - Photos, charts, summaries
- **Quarterly Reports:**
    - Water quality, vegetation recovery, community feedback
- **Annual Report (Operation):**
    - Performance against targets
    - Non-compliance issues & corrective action plans
- **Record Keeping**

  The contractor must keep below listed documents available at site.
- Permit documentation
- Training records
- Inspection checklists
- Incident/complaint log

8. Community Engagement

- Establish a Grievance Redress Mechanism
    - Contact person, phone lines, suggestion boxes
    - Timely response (e.g., within 7 working days)
- Regular community briefings
    - Updates on schedule, impacts, mitigation actions

9. Emergency Preparedness

- **Response Plan for Spills / Fires**
    - Emergency contacts
    - First aid kits, spill kits
- **Training**
    - Drills for workers quarterly

10. Performance Indicators

Indicator	Target/Threshold
Dust complaints	< 1 per month
Noise exceedances	0
Waste properly disposed	100%
Erosion incidents	0

11. References / Standards

- Somaliland environmental policies (as applicable)
- IFC Environmental & Social Performance Standards
- World Bank EHS Guidelines — Solar Projects

ANNEX 5 - HEALTH, ENVIRONMENTAL, SAFETY & SECURITY PLAN (HESSP) GUIDE

Submit Detailed HESSP Plan. Below is a guide.

DT Global

sinaan
sikastaba | in every way

UK International Development
Partnership | Progress | Prosperity

Health, Environmental, Safety & Security Plan (HESSP) Template

Table of Content

Construction Environmental, Health, Safety & Security Plan

for

Project Name

Project Location: Insert Project Location

Project Number: Insert Project Number

Prepared By: XYZ Company

Submitted To: SINAAN

Submission Date: ……/…../20….

There is no work, or the job is important than human life and health. This Health, Environmental, Safety & Security Plan (HESSP) will guide the contractor to plan their employees safe working conditions and will not create any damage to the public health or the environment due to the construction activities. Safety must be an integral part of each job. Full participation, cooperation, and support are necessary to ensure the safety and health of all persons and property involved in the project. Good project managers are trying to prepare precise action plans for safety and QC to ensure that the job is done right in a safe surrounding and that no major accidents occur on project site.

XYZcompany policy about safety is to perform all tasks and construction activities, safely with full regard to the well-being of workers, visitors, public, and the environment. If a job represents potential safety or health threat, every effort will be made to plan a safe way to do the job. We believe that if there is no any way to do a job safely, then it shall not be done at all. The following pages describe the **XYZ** performance in regard to safety assurance during the implementation of **Insert Project # & Name**, projects that comprises of the following major activities or tasks.

1. ----------

2. ----------
3. ----------
4. ----------
5. ----------
6. ----------
7. ----------
8. ----------
9. ----------

1. Introduction

XYZ Company as a contractor for implementing the project **Insert Project # and Name**

And according to his contractual responsibility has to provide safety plan to maintain safe work performance, protect labor's life and health and not damage the environment. A safety plan is a fundamental element of the subproject implementation system. The plan in general; outlines all activities that should be considered for safety performing construction work on site and includes steps that to be taken during all phases of implementation of the project. This plan has been arranged according to the international safety acts, by SINAAN as a measure to meet local best management practices.
It should be mentioned that this plan is prepared in accordance to the size, extent, and the complexity of the project to be implemented as well as according to the present condition, existing facilities and potential resources available in the region. All management, particularly line managers are responsible for controlling the project site during the implementation of the subproject, and supervise all the issues and mitigation measures that relate to workplace secure, safe, healthy, and without causing environment problems.

2. Objectives

This Safety Plan provides both general and specific information to XYZ Contractors on the requirements and procedures for accident prevention, safety, and security at **(Insert Project # and Name)** construction site. This includes construction, rehabilitation, repair, or services required by SINAAN.

The XYZ Company safety objective is to achieve accident-free construction/PV installation projects. It can only be achieved when all operations have been conducted in a manner that will provide safe working conditions for all employees and labors, and protect the public and all others who may be affected by construction activities. The main objectives of this safety plan can be summarized as follow:

- To eliminate hazards, or minimize it to an acceptable level of risk for people, plant and the environment.
- To promote and maintain (provide) healthy and safe work condition for employee, labors, service providers and all others involving in the construction of the project.

3. Scope

This Site Construction Safety Plan applies to all aspects of the construction/rehabilitation/PV Installation works and associated activities, to be performed for carrying out subproject **(Insert Project # and Name)** from start to the end. XYZ Company is responsible for considering all clauses of these documents during the implementation of the project.

4. Responsibilities

Safety must be an integral part of each job especially construction activities. Full participation, cooperation, and support are necessary to ensure the safety and health of all persons and property involved in the project. So that throughout all phases of construction, managers, supervisors, project managers, construction inspectors, construction safety specialists, and other personnel overseeing construction must monitor field activities frequently to ensure that they are conducted safely. They must ensure that appropriate measures are taken to minimize the possibility of personal injury, damage to property, adverse effects to the environment, and program disruptions or delays resulting from the accident.

All management staffs and especially line managers in XYZ Company will combine their efforts to produce a safe surrounding in the project site. Following is a short description of responsibilities of relevant management authority at the different level of XYZ Company in this regard.

4.1 Director of the Company

The director of the company is ultimately responsible for the safe performance of onsite activities, from start to end of the project. So that:

a- He/She is responsible for producing and enhancing the system of HES&S for the project and facilitate for the smooth running of the system.

b- He should frequently supervise the activities, project management staffs, labors, equipment and job site for safety, and analyze the safety system time by time to bring farther more improvement in HES&S system.

c- He will assign an on-site safety and health professional with authority to enforce all the safety requirements for the project to control all aspects related directly or indirectly to safety issues. It is not necessary the safety, and health professional is a full-time employee of XYZ Company, but he shall visit the site daily, or as common understanding between XYZ Company and SINAAN.

4.2 Project Manager

a- As a main responsible person on job site, the project manager will maintain his close cooperation with the safety specialist. He will always supervise the activities don by safety specialist and provide good support for him to perform his duty in the best manner.

b- He will prepare and maintain necessary facilities for safety and health professional to perform his duties properly and without anxiety. He will cooperate with him to apply safety requirement and regulation in the job site.

4.3 Safety and Health Professional

a- As the focal person for implementing SH&E regulations and plan on job site, he is responsible for creating, developing, applying and conducting safety and health principles in the workplace.

b- He will analyze situations and conditions, predict probably risks and hazards and prepare an action plan to mitigate or eliminate the effects of risk if it happens.

c- He will recognize the urgent needs of all those who are working in job site for protective wearing and equipment and furnish them with required wearing and equipment.

d- In the case of occurrence an accident, he will spend his all efforts to control the situation and take urgent action to mitigate the accident effects to the minimum possible level.

e- The safety and health professional will schedule and hold safety meetings (training) for employees, skilled and unskilled labors and all other those who are involving in construction activities.

f- In addition to above, he will do the short sentence we can summarize the job of safety and health professional as follow:

- Assist in conducting a workplace hazard assessment.
- Assist in PPE selection.
- Assist in developing worker training.
- Conduct periodic audits of PPE program.

4.4 Labors and workers

- Attend training.
- Use personal protection equipment (PPE) when necessary

5. Submittal

XYZ company will submit the following documentation, for review and acceptance by the SINAAN.

- SH&F plan prepared by the company at least one week before commencing physical activities of the project.
- Documented evidence (CV/RESUME) of the Safety Professional.
- On time accident report, if it happened, not latter then the first 12 hrs.

6. Risks & Hazards

Construction sites are hazardous by nature. The environment is not only dangerous, the materials and chemicals that are used also pose a health threat to construction workers and others at the site. To make construction site safe, we can minimize the hazards, train employees in safe work practices and increase awareness of construction site safety. In general, there are several types of risks in construction sites that to be predicted and protected. These risks if happen; produce death, injury,

and delay in project duration, waste of resources and a series of other problems. The important type of them which XYZ company is dealing whit here is health hazards on job site that can be predicted and take protective action plan for them.

Following table describes tasks, related risk, results and how to protect employees and labors.

SAMPLE TABLE FOR SITE RELATED SITE RELATED RISKS AND PREVENTIVE ACTIONS			
Type of work	Risk	Result	Protection and preventive actions
Excavations and trenches	The collapse of the side walls, Damage to underground utilities, falling of humans, equipment, and animals	Death, Physical Injury, Waste of Resources	Prevent the side walls from collapsing or slide, by battering them to a safe angle or supporting them with timber, sheeting or other proper supporting systems. Be aware of underground utilities. Provide substantial barriers: e.g., guard rails and toe boards.
Demolition	Falling material, Dust, and Pollutions, Noise, Vibration	Physical Injury, Sickness, environment damage	Always choose the lowest impact tool available that will still effectively perform the task When breaking up a slab, angle the tool to the surface and make fissures in the material. Avoiding positioning the tool perpendicular to the work
Scaffoldings	The disintegration of Scaffolding parts, Falling workers, and things	Death, Physical Injury, Waste of Resources	Assigning professional scaffolding worker. Selecting the Right Scaffold for the Job. Sound design and proper erection. Installing proper guardrails. Shall not be loaded beyond their rated and maximum capacity. Tag any incomplete scaffold or damaged component out of service
Work in elevations and towers	Falling workers and things	Death, Physical Injury, Waste of Resources	Provide -Safe access to workplace. - full body harness -Anchorage points. –Guardrails. – Maybe canopy
Painting	Existing of lead in oil paint composition	Illness	Using lead-free paints

Note: This table is prepared just as a sample. Companies shall prepare their own according to their projects

7. Personal Protective Equipment

Personal protective equipment (PPE) is used to increase individual safety while performing potentially hazardous tasks. PPE may include safety glasses, hard hats, gloves, respirators, or any equipment or clothing used to protect against injury or illness. XYZ Construction Company will ensure that the proper types of PPE are available and used by employees.

PPE comprises of special clothes and other protective elements as follows

7.1 Safety glasses

With side shields to protect against flying particles (e.g., sawdust, nails, metal shavings, etc.). Goggles should be used to protect against molten metal, liquid chemicals, acids and caustic liquids, chemical gases and vapors. Shaded eyewear should be used to protect against potentially injurious light radiation (e.g., cutting and welding, lasers).

7.2 Hard hats

Must be worn at all times during a construction project until the ceiling is finished or equivalent has been installed. All workers in areas where there is a possible danger of head injury from impact, from falling or flying objects, or from electrical shock and burns must also be protected by a hardhat.

7.3 Footwear:

Leather work shoes are required. Sneakers are not permitted. Protective footwear (e.g., steel toe boots, reinforced soles, insulated, etc.) must be worn in areas where there is the potential for foot injuries from falling or rolling objects, from objects piercing the sole, or from exposed energized electrical conductors that could contact the feet.

7.4 Clothing:

Pants must be worn while at a construction site. Shorts are not permitted.

7.5 Hand protection:

Proper hand protection (e.g., leather work gloves, welder's gloves, appropriate chemical protective gloves, etc.) to protect against cuts or lacerations, abrasions, punctures, hazards of skin absorption of harmful substances, chemical burns, thermal burns, or harmful temperature extremes must be worn.

7.6 Hearing protection

Must be worn on the job site when noise levels exceed the permissible exposure limit defined by the Occupational Safety and Health Administration under requirements outlined in OSHA 1910.95

8. Training

Each worker required to use PPE must receive training in the following:

- how to properly wear PPE
- what types of PPE protect against the hazards identified during the assessment
- when PPE must be used · the proper care and useful life of PPE
- proper disposal of damaged PPE

XYZ Company will certify in writing that workers have received and understood this training. Training assistance is available through EHS.

9. Environmental Mitigation Measures

Environmental protection is a requirement for work on SINAAN projects and will be monitored by SINAAN Engineers. The XYZ Company is therefore required to submit as part of the HESSP, a list of mitigation measures that will be used to reduce or eliminate the risk of adverse environmental impacts. There are several types of environmental risks on construction sites that can be predicted and protected. These risks if they occur can result in degradation of natural resources including surface and groundwater, soil and air quality.

The following table provides a list of standard mitigation measures that should be considered before submitting the HESSP to SINAAN for review and approval.

Project Phase	Activity	Potential Environmental / Social Impact	Mitigation Measures
Pre-Construction	Site selection and layout design	Impacts on sensitive habitats, land use conflicts	• Conduct environmental and social screening • Avoid protected areas, wetlands, cultural heritage sites • Optimize layout to minimize footprint
	Land acquisition and access	Land disputes, loss of livelihoods	Use government/municipal land where possible • Avoid involuntary resettlement • Prepare Resettlement Action Plan/Livelihood Restoration Plan if required

Construction	Site clearing and earthworks	Vegetation loss, soil erosion	• Limit clearing to approved areas • Mark no-go zones • Restore disturbed areas after works
	Excavation and trenching	Soil erosion, sediment runoff	• Install erosion and sediment control (berms, silt fences) • Avoid works during heavy rains
	Material transport and site traffic	Dust emissions, nuisance to communities	• Water spraying on access roads • Cover transported materials • Enforce speed limits
	Construction machinery and equipment	Noise and vibration impacts	• Restrict noisy works to daytime • Maintain equipment • Provide PPE to workers
	Construction waste generation	Soil and visual pollution	• Prepare Waste Management Plan • Segregate recyclable waste • Dispose at approved sites
	Fuel and oil storage	Soil and water contamination	• Store fuel in bunded areas • Spill kits available onsite • Train staff in spill response
	Electrical and working-at-height activities	Worker accidents and injuries	• Implement OHS Plan • Provide PPE • Toolbox talks • Emergency response plan
Operation	PV system operation	Glare and visual impacts	• Use anti-reflective PV modules • Maintain buffer distances
	Routine maintenance	Waste from damaged panels	• Store damaged panels safely • Recycle through approved recyclers

	Electrical systems	Fire and safety risks	• Install fire protection systems • Routine inspections and maintenance
	Stormwater management	Localized flooding or erosion	• Maintain drainage channels • Inspect after heavy rains
Decommissioning	Dismantling of PV system	Waste generation, land degradation	• Prepare Decommissioning Plan • Recycle panels, metals, cables • Restore site

Note: This table is prepared just as a sample. Companies shall prepare their own according to their projects

10. Security Program,

Contractors Security Program should include minimum of the following

a. Project Site Entry Control
b. Restrictions
c. Project Site Security Services
d. CV of a security person
e. Transportation of DT GLOBAL SINAAN Local National staff to and from the job site (if required)
f. Security Plan for provided Facilities/ Equipment (office …etc.)
g. Site Security Plan
h. Security Organization Chart
i. Emergency Procedures
j. Parking of Machinery at site
k. Ascertaining of the Security Threats in advance
l. Reporting Mechanism
m. Evacuation Plan