



ALIMA – THE ALLIANCE FOR INTERNATIONAL MEDICAL ACTION
NIGERIA MISSION – GASHUA, YOBE OFFICE

REQUEST FOR QUOTATION FOR THE INSTALLATION OF A PHOTOVOLTAIC SYSTEM AT GASHUA, YOBE PHARMACY WAREHOUSE

Published on **29/01/2025**

ALIMA is an International non-governmental organization offering assistance to populations in distress, victims of armed conflicts without discrimination and irrespective of race, religion, and creed or political affiliation. ALIMA has been working in Nigeria since 2016.

ALIMA has received funding from a number of donors to finance the implementation of its humanitarian research activities in Nigeria, including ECF GAVI for the financing of the NUTRIVAX project in Yobe and plans to award a contract the installation of photovoltaic systems to supply electricity to Gashua project pharmacy warehouse in Yobe State.

Description
Supply and installation of photovoltaic systems to supply electricity to Gashua Project Pharmacy warehouse in Yobe State

All qualified and competent companies are eligible to participate in this RFQ. More information can be obtained from the logistics team at the ALIMA GASHUA Office, low cost Opposite Ateeseer Islamic School Agwaya Street (Yobe state) or by using the following e-mail address: yobe.logmanager@nigeria.alima.ngo. Interested bidders can personally visit the ALIMA Office at the address to collect the RFQ document free of charge or by downloading a copy from eBid, eTenders and NGOJobSite online Advertising Platforms.

The Tender documents provide all relevant information in detail, including required documents and information as well as award criteria.

Calendar	
RFQ reference	24/NGA/YOBE/NG119/299
RFQ Publication	29/01/2025
Collection of Quotations	From 29/01/2025 at 8am to 28/02/2025 at 5pm, Local Time
RFQ Deadline	28/02/2025, at 05:00 pm, Local Time
Public Bid Opening Session	05/03/2025, at 11:00 am, Local Time, in GASHUA YOBE OFFICE and ABUJA ALIMA OFFICE
Confidential Evaluation of Tenders	Between 05/03/2025 and 07/03/2025 (Subject to change)
Supplier Vetting & Reference checks	Between 10/03/2025 and 14/02/2025 (Subject to change)
Award of the Contract	Between 17/03/2025 and 18/03/2025 (Subject to change)
Contract Start Date	20/03/2025 (Subject to change)

Tenders prepared in English must be submitted in hard copy or electronically via email to yobe.logmanager@nigeria.alima.ngo copying sourcing@nigeria.alima.ngo must be received or delivered to the following address no later than **10 a.m. on 28th february2025**.

YOBE PROJECT OFFICE
Located at: Low Cost, Opposite Ateeseer Islamic School Agwaya Street, Yobe State

Done in Yobe, on **29th January 2025**.

YOBE PROJECT LOGISTICS TEAM



ALIMA – THE ALLIANCE FOR INTERNATIONAL MEDICAL ACTION
NIGERIA MISSION – GASHUA, YOBE OFFICE

**SPECIFICATIONS FOR REQUEST FOR
QUOTATIONS FOR ALIMA
IN GASHUA, YOBE OFFICE**

SUBJECT:

**REQUEST FOR QUOTATION FOR THE INSTALLATION OF A
PHOTOVOLTAIC SYSTEM AT YOBE PHARMACY WAREHOUSE**

REF N°: **24/NGA/YOB/NG119/299**

The deadline for receipt of bids is:

28th February 2025 at 5:00 PM local time

I. PRESENTATION OF ALIMA

The ALIMA SPIRIT: *ALIMA's raison d'être is to save lives and care for the most vulnerable populations, without any discrimination based on identity, religion or politics, through actions based on proximity, innovation and the alliance of organisations and individuals. We act with humanism, impartiality and respect for universal medical ethics. In order to access patients, we commit ourselves to intervene in a neutral and independent manner.*

THE VALUES and PRINCIPLES of our action, as set out in our CHARTER:

1. The patient first
2. Revolutionising humanitarian medicine
3. Responsibility and freedom
4. Improve the quality of our actions
5. Trust
6. Collective intelligence

CARE - INNOVATE - TOGETHER: Since its inception in 2009, ALIMA has cared for more than 4 million patients, and today deploys its operations in 11 countries in Africa. In 2018, we developed 41 humanitarian medical response projects to meet the needs of populations affected by conflict, epidemics and extreme poverty. All of these projects are in support of national health authorities through nearly 330 health structures (including 28 hospitals and 300 health centres). We work in partnership, particularly with local NGOs, wherever possible to ensure that our patients benefit from expertise wherever it is available, whether in their country or in the rest of the world. In addition, to improve the humanitarian response, we conduct operational and clinical research projects, particularly in the areas of malnutrition and viral haemorrhagic fevers.

THE ALIMA TEAM: More than 2000 people are currently working for ALIMA. The field teams, close to the patients, receive their support from the coordination teams generally based in the capital of the countries of intervention. They are supported by the 4 desk teams and the emergency and opening service team based at the operational headquarters in Dakar, Senegal. The teams in Paris and New York are actively involved in fundraising and representing ALIMA. The rest of the ALIMA galaxy includes individuals and partner teams working on behalf of other organisations such as the medical NGOs BEFEN, ALERTE Santé, SOS Médecins / KEOOGO, AMCP, the research organisations PACCI, INSERM, the Universities of Bordeaux or Copenhagen, the NGO Solidarités International and many others.

OUR COUNTRIES OF INTERVENTION: Mali, Burkina Faso, Central African Republic, Nigeria, Niger, Chad, Democratic Republic of Congo, Cameroon, Guinea, South Sudan, Mauritania, Dakar.

OUR PROJECT THEMES: Malnutrition, Maternal Health, Primary Health, Pediatrics, Malaria, Epidemics (Ebola, Cholera, Measles, Dengue), Hospitalization, Emergencies, Gender Based Violence, Mental Health, ...
For news of ALIMA's missions around the world, visit our website at: <https://www.alima-ngo.org/fr/>

REQUEST FOR QUOTATION, N°: 24/NGA/YOB/NG119/299

1. ALIMA works in Nigeria to save lives and care for the most vulnerable populations without discrimination based on identity, religion, or politics through actions based on proximity, innovation, and the alliance of organisations and individuals.
2. As part of its medical activities, ALIMA has received funding from a number of donors, including ECF GAVI for the financing of the NUTRIVAX project.
3. It is planned that part of these funds will be used to finance **the installation of photovoltaic systems to supply electricity to Gashua project pharmacy warehouse in Yobe State.**
4. ALIMA is therefore soliciting bids from eligible candidates who meet the qualification criteria required for the work in question.
5. The contract will be awarded by negotiated procurement procedure in accordance with ALIMA's internal procedures.

Interested suppliers can directly obtain information from the logistics team at the **ALIMA GASHUA Office, low cost Opposite Ateeseer Islamic School Agwaya Street (Yobe state).**

6. Tenders submitted in **hard copy or electronically via email to yobe.logmanager@nigeria.alima.ngo** copying sourcing@nigeria.alima.ngo must be received or delivered to the following address: **ALIMA GASHUA Office, low cost Opposite Ateeseer Islamic School Agwaya Street (Yobe state)** no later than 5p.m. on **28th february 2025**. Tenders will be opened **on 05th March 2025 at 11 a.m** at the above address in the presence of the tenderers who wish to attend or their duly authorised representatives. Tenders received after the deadline will be rejected.
7. Tenderers will remain bound by their tenders for a period of **90 days** from the deadline for submission of tenders.
8. By reasoned decision, ALIMA reserves the right not to proceed with all or part of this Call for Tenders.

Done at Abuja, on 28th January 2025

The Head of Mission

Dr SOMA Bahonan

ALIMA - The Alliance for International Medical Action

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www.alima.ngo



I. INSTRUCTIONS TO BIDDERS

CHAPTER I: GENERALITIES

Article 1: Purpose

The subject of this National Open Call for Tenders is the supply and installation of photovoltaic systems to supply electricity to GASHUA pharmacy warehouse in YOBE state, Nigeria.

Article 2: Allotment

The work consists of one lot: supply and installation of photovoltaic systems for the pharmacy warehouse in Yobe State Nigeria

Article 3: Financing the work

The work will be funded by ECF GAVI through the NUTRIVAX project.

Article 4: One bid per tenderer

Each tenderer must submit only one tender. A bidder who submits more than one bid will be disqualified.

Article 5: Tender fees

The tenderer shall bear all costs associated with the preparation and submission of its tender and ALIMA shall not be liable or responsible for any such costs, irrespective of the conduct or outcome of the tender process.

Article 6: Site visits and technical analysis of the file

6.1 Tenderers are strongly recommended to visit the site of the works and its surroundings and to obtain by themselves and at their own risk all the information that may prove necessary for the preparation of the tender and the possible conclusion of the contract; the costs associated with these visits are to be borne by the tenderers.

6.2 It is also strongly recommended that the bidder analyses the entire file to remove any omissions or shortcomings and make a complete proposal. This proposal must be separate from the basic bid. If this analysis is not carried out by the tenderer, ALIMA will not be held responsible for any consequences linked to an omission or insufficiency in the dossier.

Article 7: Modification of the Tender Documents

7.1 Up to three (3) days before the deadline for submission of tenders, ALIMA may amend the request for quotation documents by publishing an addenda. In this case, ALIMA will inform the participating bidders of the amendment.

7.2 Any published addendum will form part of the Request for Quotation documents and will be communicated in writing to all bidders. Bidders will acknowledge receipt of each addendum in writing.

7.3 In the event of an addendum, ALIMA may postpone the deadline for submission of tenders as much as necessary in order to give tenderers sufficient time to prepare their tenders.

CHAPTER II: PREPARATION OF TENDERS

Article 8: Language of the offer

All tender documents and all correspondences between the tenderer and ALIMA shall be in English.

Any printed document provided by the applicant may be in another language, provided that it is accompanied by an official English translation. In this case, and for the purposes of interpreting the submission, the English translation shall take precedence.

Article 9: Documents comprising the offer

9.1 Tenders must include the following documents, duly completed and signed:

1. Administrative offer

- a) The letter of tender in which the candidate will indicate the deadline for carrying out the work, the guarantee and the validity of his tender.
- b) Valid Certificate of incorporation of the company CAC.
- c) Valid Tax registration certificate TIN and TCC.
- d) A certificate of non-bankruptcy and non-liquidation by court order.

2. Technical offer

- a) The list of management staff to be assigned to the project. This list must be accompanied by CVs and certified copies of their various diplomas.
- b) A list of experience over the last three years, with supporting documents.
- c) A proposal for a technical (electrical) diagram in accordance with the technical specifications and the costing framework, accompanied by a list of equipment specifying the brand, model and quantity of each piece of equipment.
- d) Technical specifications and images of the proposed equipment.
- e) The schedule for carrying out the work, clearly showing the lead times from orders to delivery on site and installation times.
- f) A list of omissions and shortcomings identified in the dossier and proposals relating thereto (optional).

3. Financial offer

- a) Quotations and estimates in accordance with the attached model.
- b) The unit price schedule.
- c) Detailed costs in accordance with the bidder's proposal (detailed list of equipment with quantities, unit prices and total prices).

9.2 Tenderers should use the relevant documents and templates included in the request for quotation file.

9.3 All the documents in the administrative offer are compulsory and the absence or non-conformity of any document will result in the rejection of the offer. However, depending on the bids received, ALIMA reserves the right to grant, at its own discretion, waivers that will apply to all bidders.

The constituent parts of the technical offer will be scored in accordance with the criteria and points system described in Article 22.

Article 10: Amount of the offer

10.1 The contract will cover all of the work, on the basis of the price schedule and the quantified and estimated details submitted by the tenderer.

10.2 The tenderer will fill in the unit and total prices for all the items in the price schedule and the quantity and estimated breakdown.

10.3 Items for which the bidder has not indicated a unit price will not be the subject of any payment by ALIMA after execution and will be assumed to be covered by other prices in the quantitative and estimated breakdown.

10.4 Unit prices must be shown net of tax in the unit price schedule, separately in figures and letters.

10.5 In the event of a discrepancy between the estimated price in words and the price given in figures, the price given in words shall prevail.

The framework of the estimate will be rigorously completed by the tenderer by applying the unit prices to the quantities already shown on the framework of the estimate and quantity.

In the event of a discrepancy between the unit price used in the estimate and that given in the unit price schedule, the price given in the latter shall prevail.

Article 11: Currency of submission and settlement

The unit price, the total tender prices and the contract settlement shall be denominated in the currency that is legal tender in Nigeria.

Article 12: Tender validity period

12.1 Tenders will remain valid for a period of **ninety (90) days** from the closing date for the submission of tenders.

12.2 Any tender whose validity period is shorter than that indicated in the previous paragraph may be rejected by ALIMA as being non-compliant.

12.2 In exceptional circumstances, before the expiry of the initial period of validity of tenders, ALIMA may ask tenderers to extend the period of validity for an additional specified period. The request and responses must be made in writing. Tenderers who agree to extend the period of validity of their tender may not modify their tender.

A Tenderer may refuse to extend the validity period of its tender, in which case its tender will not be evaluated.

Article 13: Submission and signature of the offer

13.1 The tenderer shall submit its tender in **one hard copy and one scan copy in a new USB drive** in the same sealed envelope.

13.2 The hard copy tender is initialled and signed by the person(s) duly authorised to sign on behalf of the tenderer.

13.3 The tender shall not contain any alterations or overwriting, with the exception of those intended to correct the tenderer's errors, in which case these corrections shall be initialled by the signatory or signatories of the tender.

Article 14: Sealing and marking of bids

14.1 Tenderers must submit their bids in a sealed, anonymous outer envelope bearing the following information:

- REQUEST FOR QUOTATION N° **24/NGA/YOB/NG119/299** for solar systems in GASHUA, YOBE state.
- To be opened only during the bid opening session.

This envelope will contain three (3) other envelopes marked "**Administrative Offer**", "**Technical Offer**" and "**Financial Offer**" and the addresses of the candidate.

14.2 If the envelope is not sealed and marked as indicated above, ALIMA shall in no way be held responsible if the tender is lost or opened prematurely.

14.4 Upon rejection, the envelope must remain sealed and bear no sign identifying the tenderer.

CHAPTER IV: SUBMISSION OF TENDERS

Article 15: Deadline for submission of tenders

15.1 Tenders shall be received at the place, date and time indicated in the national open tender notice.

15.2 ALIMA may, in exceptional circumstances and at its discretion, extend the deadline for submission of tenders by publishing a corrigendum under the same conditions as the national open tender notice. The rights and obligations previously governed by the initial deadline will be governed by the new deadline.

Article 16: Late bids

No tender will be received after the deadline specified in article 15 above, whatsoever the reason for the delay.

Article 17: Modification and withdrawal of tenders

17.1 The tenderer may modify or withdraw its tender after it has been submitted, provided that ALIMA receives written notification of the modification or withdrawal before the deadline for submission of tenders.

Notification of modification or withdrawal of the tender by the tenderer must be written, sealed and marked. Withdrawal may also be notified by fax or e-mail, but in this case must be confirmed by a duly signed written

notification, the date of which, as evidenced by the postmark, must not be later than the deadline set for the submission of tenders.

17.2 No tender may be modified after the deadline set for the submission of tenders.

CHAPTER V: OPENING OF BIDS AND EVALUATION OF TENDERS

Article 18: Date of opening of bids

The opening of bids will take place at the place, date and time indicated in national open tender notice in the presence of the representatives of the bidders who wish to attend. However, ALIMA reserves the right to postpone the date and/or time of the opening in the event of non-availability of the members of the selection committee or for any other reason beyond its control. In this case, bidders will be informed of the new opening date and time by e-mail or telephone.

Article 19: Opening of bids

An evaluation committee will be set up and will publicly open the bids in the presence of the tenderers' representatives who wish to attend. The tenderer representatives present will sign an attendance list which will be attached to the opening minutes.

When the bids are opened, the committee will announce the names of the bidders, the amounts of the bids and any other information it deems appropriate.

The evaluation committee will draw up the minutes of the bid opening, which will include the information given to the tenderers present. These minutes will be signed by all the members of the evaluation committee.

Article 20: Procedure for evaluating technical offers

20.1 The evaluation committee will analyse the administrative and technical bids in a confidential analysis session.

20.2 The evaluation committee will assess the bids on the basis of their compliance with the eligibility and qualification criteria as follows:

- The committee evaluates the conformity of the administrative documents. At this level, if at least one document is missing or non-compliant, the offer will be rejected).
- Then the committee evaluates the documents of the technical offers on the basis of the conformity criteria and the desirable criteria using a point system specified in Article 21 below to assign technical scores (St) to each offer. Only compliant technical offers will be analysed.
- The financial offers corresponding to the compliant technical offers will be scored as follows after all the necessary corrections:
 - The lowest financial offer receives 50 points
 - The other offers are scored with the formula : $S_f = F_o * 50 / F$ where F_o is the lowest offer and F the evaluated offer
- Finally, the committee calculates the overall scores for each compliant offer by adding the technical scores and the financial scores

Article 21: Technical bid evaluation criteria

21.1 Compliance criteria

At this stage, if at least one of the proposed equipment is not compliant, the offer will be deemed non-compliant. However, the evaluation committee may ask the supplier for additional information for the evaluation.

Criteria	Sub-criterion	Compliance criteria
	Monocrystalline solar panels	<ul style="list-style-type: none">● Monocrystalline silicon solar panels

Features of the equipment offered		<ul style="list-style-type: none"> Power equal to or greater than the requested power (530Wp) or overall power equal to or greater than the overall peak power (13.2 kWp)
	Charge controller	<ul style="list-style-type: none"> MPPT controller Load current: at least 120A Compatible with lithium batteries Maximum PV power: at least 6.6kWp
	Batteries lithium LFP (LiFePO4) de 15kWh, 48V	<ul style="list-style-type: none"> Battery type: lithium iron phosphate LFP (LiFePO4) Capacity: at least 10kWh per battery or overall capacity greater than or equal to the overall capacity requested (40kWh) Number of cycles: at least 6000
	Onduleur hybride avec MPPT	<ul style="list-style-type: none"> Signal type: pure sine Power: at least 5kVA Integrated MPPT with load current of at least 100A Maximum PV power: at least 6kWp Compatible with lithium batteries
List of management staff	Chef de projet	<ul style="list-style-type: none"> Electrical engineer/electromechanical engineer/energy engineer with at least five (05) years' experience and at least two similar experiences (work of equal complexity).
	A works manager	<ul style="list-style-type: none"> Electrical/electromechanical/energy works engineer with at least four (04) years' experience and at least two similar experiences (works of equal complexity)
Tenderer reference	Experience over the last three years, with supporting documents	<ul style="list-style-type: none"> Provide proof of similar experience (photovoltaic installations for electricity) over the last three years: at least three experiences.

21.2: Desirable criteria

The following criteria will be scored:

Criteria	Detail	Scale
Technical drawing proposal	Proposal of a detailed technical diagram showing all system components (15 points) <ul style="list-style-type: none"> ✓ <i>Not very detailed: 2 points</i> ✓ <i>Conforms and is fairly detailed: 5 points</i> ✓ <i>Conformal and detailed: 10 points</i> 	10 points
Equipment warranty	<ul style="list-style-type: none"> ✓ Solar panels: 3 points ✓ Charge controller: 4 points ✓ Lithium battery: 15 points ✓ Hybrid inverter: 8 points 	30 points

	Equipment warranty: calculated on the basis of the lead times proposed by other bidders	
Le planning d'exécution des travaux	Coherent, complete and realistic planning (must take into account order lead time, including customs formalities if necessary, and the various stages of installation): 5 points Proposed lead time: 5 points (calculated on the basis of lead times proposed by other bidders)	10 points

Article 22: Confidentiality of proceedings

22.1 No information relating to the examination, clarification, evaluation and comparison of tenders and recommendations concerning the award of the contract may be divulged to tenderers or to any other person not officially participating in this procedure before the announcement of the award of the contract.

22.2 Any duly recorded attempt by a tenderer to influence ALIMA in the examination of tenders or the award decision may result in the rejection of its tender.

Article 23: Clarification of bids and contacts with the project owner.

To facilitate the examination, evaluation and comparison of tenders, ALIMA may ask any tenderer to provide clarification of its tender, including a sub-detail of unit prices. The request for clarification and the response thereto shall be made in writing, but no change in the amount or content of the tender shall be sought, offered or authorised.

Article 24: Correction of errors

24.1 The evaluation committee will check the open financial bids to correct any calculation errors. It will correct errors as follows:

- Where there is a difference between the amounts in figures and in words, the amount in words shall prevail;
- Where there is an inconsistency between the total price and the total price obtained by multiplying the unit price by the quantity, the unit price quoted will prevail, unless the committee considers that there is a gross comma error in the unit price, in which case the total price as submitted will prevail and the unit price will be corrected.

24.2 The amount stated in the tender will be corrected by the evaluation committee in accordance with the above-mentioned procedure for the correction of errors and, with the agreement of the tenderer, the said amount will be deemed to be binding on the tenderer.

24.3 If the tenderer does not accept the correction made in this way, his tender will be rejected.

Article 25: Abnormally low bids

If a bid is found to be significantly (<80%) below the usual market prices or estimates, ALIMA reserves the right, if necessary, to contact the bidder to receive formal confirmation of the proposed prices in order to ensure that the work can be delivered in accordance with the rules of the trade.

Article 26: Evaluation and correction of bids

26.1 In evaluating the bids, the committee will determine for each bid the evaluated amount of the bid, adjusting, if necessary, its amount as follows:

- correcting any clerical errors;
- making appropriate technical or financial adjustments to any other quantifiable changes, discrepancies or reserves;
- by applying the discounts offered by the bidder;

26.2 ALIMA reserves the right to accept or reject any modification, discrepancy or reservation. Modifications, deviations and other factors that exceed the requirements of the Dossier will not be taken into consideration in the evaluation of tenders.

Article 27: Ranking of bidders' offers

Compliant bidders will be ranked according to their overall scores. The bidder with the highest score is ranked first.

CHAPTER VI: AWARD OF THE CONTRACT

Article 28: Allocation

28.1 ALIMA will award the contract(s) to the highest-ranked bidder in accordance with the indications given in Article 27 above.

28.1 ALIMA reserves the right to revise the scope of the work at the time of the award, in particular, to take account of any observations and/or omissions and shortcomings noted by the tenderers or to take account of budgetary limits.

Article 29: Right to continue or cancel the procedure

29.1 ALIMA reserves the right to continue or cancel, by reasoned decision (where the technical or economic elements of the contract have been fundamentally altered, exceptional circumstances and/or force majeure make normal performance of the contract impossible or where funding is interrupted or cancelled), the tendering procedure, at any time before the award of the contract, without incurring any liability towards the tenderer(s).

In the event of cancellation of the procurement procedure, ALIMA will inform all tenderers in writing of the reasons for the cancellation within forty-eight (48) hours.

29.2 ALIMA may also declare the invitation to tender unfruitful if it finds that:

- It has not received any offer;
- Serious irregularities marred the free play of competition;
- The amounts of the compliant bids greatly exceed the financial resources allocated under the contract and negotiations for price revisions have failed.

When the amounts of the compliant bids exceed the available financial resources and provided that the technical specifications set out in the tender documents are not substantially modified, ALIMA may, before the award decision, ask the evaluation committee to discuss with the tenderers whose bids have been deemed compliant in ascending order of ranking in order to reduce the amount of their bids accordingly. Minutes will then be drawn up and signed by both (2) parties.

If none of the bidders agrees to reduce their price accordingly, the call for tenders could be declared unfruitful.

Article 30: Notification of contract award

Before the expiry of the period of validity of the tenders, ALIMA will notify the successful tenderer in writing that its tender has been accepted. This letter will indicate the amount of the contract, the deadline for carrying out the work and the guarantees required; the deadline for carrying out the work runs from the date set on the service order.

ALIMA will at the same time inform the other unsuccessful tenderers of the reason for the rejection of their bids.

Article 30: Signing of the contract

30.1 ALIMA will send the successful tenderer the contract document summarising all the provisions accepted by the parties.

30.2 Within 48 hours of receiving the document, the successful tenderer must initial, sign, and return it.

30.3 If the successful tenderer does not meet the conditions stipulated in Article **33.2** above, the award of the contract may be cancelled. ALIMA may then award the contract to the tenderer ranked second.

Article 31: Approval and entry into force of the contract

The contract comes into force and is fully binding for both parties once it has been signed by both parties.

Article 32: Corruption or fraudulent manoeuvres

32.1 ALIMA will require tenderers to comply with the strictest rules of professional ethics during the award and performance of the contract. In accordance with this principle, ALIMA defines the expressions below as follows:

a) Corruption" means offering, giving, soliciting or accepting any advantage with a view to influencing the action of a member of staff during the award or performance of a contract;

b) Fraudulent manoeuvres" means any act which distorts or misrepresents facts in order to influence the award or performance of a contract in a manner prejudicial to ALIMA. Fraudulent manoeuvres" include, in particular, any agreement or collusive manoeuvre by bidders (before or after submission of the proposal) aimed at artificially maintaining proposal prices at levels that do not correspond to those that would result from free and open competition, and at depriving ALIMA of the benefits of the latter.

32.2 ALIMA may exclude any company, for a given period, from any award of contracts if it is established at any time that this company has engaged in corruption or fraudulent manoeuvres with a view to obtaining or during the performance of a contract.

WORK DESCRIPTION

I. GENERALITIES

1.1. FIELD OF APPLICATION

These technical specifications concern the supply and installation of photovoltaic systems to supply electricity to GASHUA pharmacy warehouse in Yobe state, Nigeria.

These specifications constitute minimum requirements that must necessarily be met by tenderers. However, tenderers are encouraged to propose improvements in line with the following basic principles:

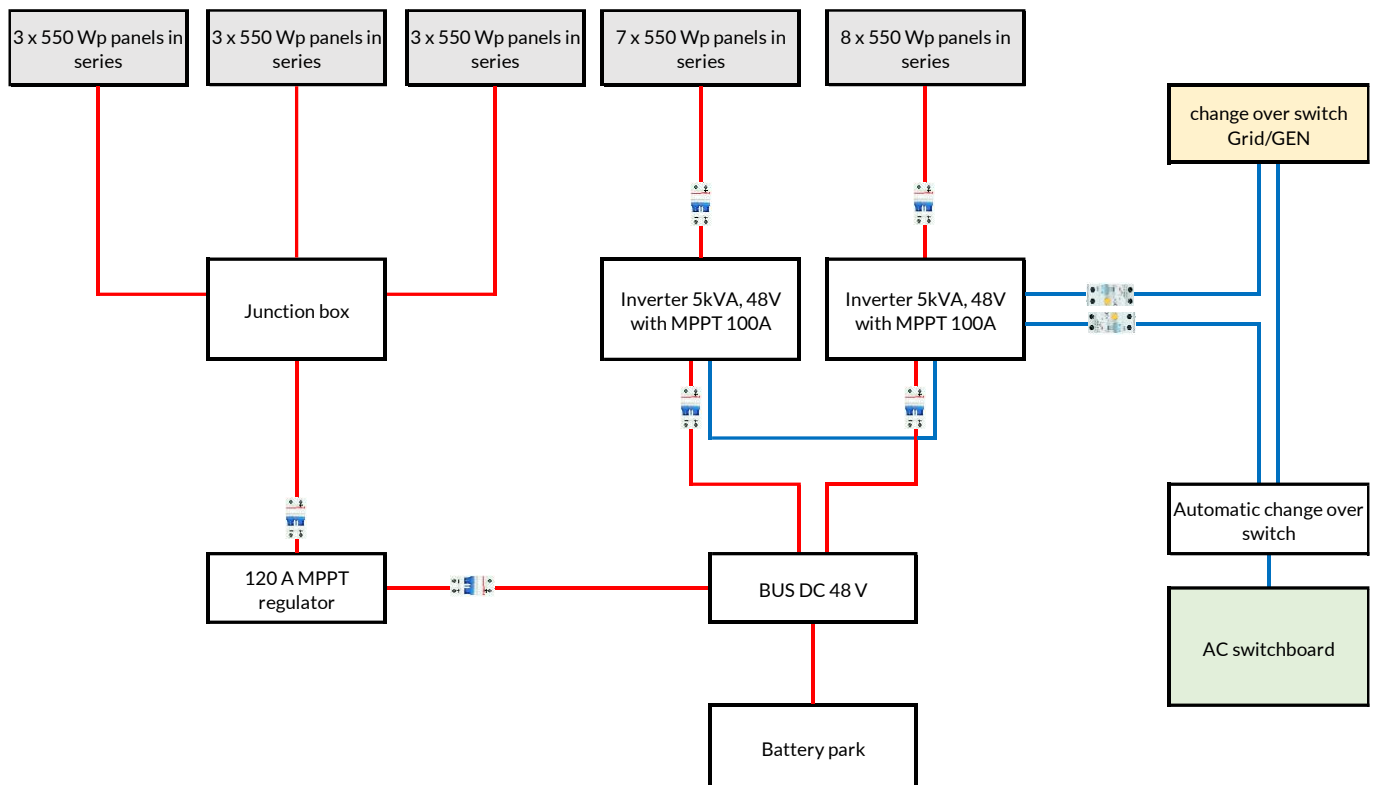
- (i) Equipment reliability,
- (ii) Optimisation of operating and maintenance conditions to take account of climatic conditions.
- (iii) Availability of equipment.

The technical solution chosen for this project consists of two solar systems connected to the grid/generator set without injection

The proposed systems will comprise the following elements in accordance with the following schematic diagrams:

1. A solar array made up of monocrystalline modules
2. MPPT controller/charger
3. A fleet of lithium batteries
4. Two hybrid inverters with MPPT
5. Protective equipment
6. Cables and other accessories

1.2. BLOCK DIAGRAM



1.3. REFERENCE CLIMATIC CONDITIONS

Tenderers will propose solutions and equipment taking into account the climatic conditions of the project site. Particular attention will be paid to issues of humidity, temperature and rainfall.

1.4. REGULATORY TEXTS. STANDARDS AND REFERENCE TEXTS

All solar installation, components and manufacturers must comply with international electrical safety standards, laws and regulations in force in Nigeria. Components shall comply with the most stringent IEC standards for solar PV equipment and design. By way of example, the requirements of the following standards must be met.

Standards for the solar generator section

- UTE C 57-300 (May 1987) : descriptive parameters of a photovoltaic system.
- UTE C 57-310 (October 1988) : direct conversion of solar energy into electrical energy.
- UTE C 15-712 (February 2008) : Low-voltage electrical installations - Practical guide Photovoltaic installations.
- NF EN 61173 (February 1995) : Overvoltage protection for photovoltaic (PV) power generation systems - Guide.
- DIN VDE 0126 (February 2006) : Inverter operating specifications (islanding, voltage and frequency window, DC injection) - Inverter shutdown conditions.
- CEI 61 730: Qualification for the safe operation of photovoltaic modules.

Standards relating to safety and lightning protection

- NF C 15-100 (December 2002) : low-voltage electrical installations :
- UTE C 18 510: compendium of general electrical safety instructions
- Guide d'utilisation UTEC 15-443 (2004) : Choosing and installing low-voltage surge protectors
- NF C 17-100 (décembre 1997) : lightning protection - installation of lightning conductors
- NF C 17-102 (juillet 1997) : lightning protection - protection of structures and open areas against lightning

by lightning conductors with voltage triggering devices: Rules

- NF EN 61643-11 (2002) : low-voltage surge protectors connected to low-voltage distribution systems

Standards for LV cables

- NFC 33-209 (septembre 2005) : Electrical power and distribution cables and accessories
- NFC 33-210 (Août 1995) : Insulated or protected cables for energy networks - Rigid cables insulated with cross-linked polyethylene under a polyvinyl chloride protective sheath - H1 XDV-A series.

Batteries

- DIN40742 or similar suitable for use on PV systems.
- CEI 60896 or similar relating to cycle life at least 1500
- The safety level in accordance with standard EN 50272-2 or similar must be guaranteed.
- DIN 43539 Teil 1 ; CEI 60896-1 ; CEI 60896-2

Other standards

- Installation equipment NF C 61 100 à NF C 61 920
- Installation materials NF C 68 091 0 NF C 68 381

II. TECHNICAL SPECIFICATIONS

1.1. GENERAL EQUIPMENT INSTALLATION SPECIFICATIONS

The installation of materials and equipment will be carried out in accordance with the rules of trade and the standards in force. In particular, particular attention will be paid to the protection of:

- Materials and equipment against any deterioration due to external causes such as storms (wind, rain), water damage, lightning, etc.;
- Against any wrong operation by users or any unexpected malfunction that could lead to premature and/or irreversible deterioration.;
- Users against any risk of electrocution or other risk of accidental origin, in particular due to the battery or the inverter.;
- Buildings against any risk of accidental fire due to malfunctions or inadequate protection of the installation.

What more:

The tenderer must indicate the manufacturer's warranty as specified in this document, on the various main components, as well as the local or regional representation available for service and technical support.

- The bidder must ensure that it has a team of qualified technicians and workers to successfully carry out the required tasks.
- ALIMA will not authorize any replacement of personnel whose qualifications have been examined and accepted during the evaluation of the tender. If the replacement of such personnel is unavoidable, their replacement shall be subject to ALIMA's approval.
- The bidder must visit the selected sites to inspect them prior to installation and prepare an installation plan.
- As soon as the bidder receives the instructions to undertake the work, it must obtain written and signed approval from ALIMA on all purchased materials (PV modules, inverters, accessories and others) that will be used during the installation and must obtain approval on the installation plan.
- Components delivered to the selected site will be taken care of by the tenderer until the final installations have been accepted. It should be noted that road conditions may be unfavourable and therefore the packaging

must protect the equipment from moisture and vibration. In addition, the tenderer will be responsible for the components and equipment until the end of the first year of operation and maintenance. This means that the bidder is responsible for all components during transportation, storage, transport to sites, installation and operation for the first year.

- Tenderers taking part in the works are required to take out a "Civil Liability Insurance" policy to cover the financial consequences of damage of any kind caused to third parties:
 - a. By its personnel working on the site,
 - b. By the equipment used on the site for which he is responsible
 - c. As a result of work carried out before final acceptance.
- It is also the tenderer's responsibility to be insured against the risks of theft, deterioration for any reason whatsoever or misappropriation of materials or prefabricated elements supplied on the site.
- The tenderer must dispose of waste from the work undertaken, including waste and dirt resulting from the work, in accordance with the waste disposal recommendations of ALIMA. The sites must be returned to their original state of cleanliness.
- The bidder must carry out a verification test for the installation in the presence of a representative appointed by ALIMA.

These tests involve ensuring that:

- Correct connection of equipment conductors;
- Protective equipment and power supplies for the various items of equipment are working well;
- Switches, lights, fans, and sockets work properly;
- Circuit identification diagrams are accurate;
- The photovoltaic solar panels are working well and are well installed.
- The inverters are correctly configured

The test procedure must be submitted prior to any test for analysis and approval. The tenderer must immediately repair any malfunction resulting from the test and repeat the test.

1.2. SCOPE OF SERVICES

The services covered by these technical specifications relate to the following aspects:

- **Studies**

The Tenderer shall collect all the information required to compile its technical offer. The information and documents provided in these tender documents do not exempt the Tenderer from verifying and completing all of this documentation and ensuring the conformity of the performance of this equipment and justifying the stability of the works as well as the relevant application of safety principles. To this end, the Tenderer will be required to produce the electrical diagrams and the relevant calculation notes.

List of deliverables:

- Provisional order and supply schedules;
- Layout plans for the panels, batteries and inverters;
- Cable tray routing plans;
- Electrical diagrams of enclosures.
- Technical data sheets specifying the exact characteristics of the equipment.

All documents will be submitted to ALIMA for approval before work begins.

- **Supplies and works**

On the basis of a detailed schedule, the tenderer will provide the dates for the supply and on-site delivery of the equipment. This schedule must indicate the dates for the key stages: (i) submission of each of the documents provided, (ii) supplies, (iii) acceptance, (iv) opening of the site, (v) various installation phases, (vi) testing phases, (vii) acceptance of the installations.

Among other things, the tenderer must:

- Supply and install photovoltaic panels;
- Supply and install regulators/chargers;
- Supply, install and configure hybrid inverters;
- Supply and install protective equipment;
- Supply and install conversion equipment and cables;
- Supply and install batteries, cabling, etc.;
- Test the equipment and installation;
- Provide technical support for training and equipment maintenance;
- Train users in the use and maintenance of the installation.

The tenderer must supply all the necessary components, unless otherwise specified, as well as accessories, labour, scaffolding, etc., at the tenderer's expense, to install and put into operation fully operational units within the contractual deadlines.

1.3. TECHNICAL SPECIFICATIONS FOR INSTALLATIONS AND EQUIPMENT

1.3.1. General provisions

The plant comprises a PV array including PV modules, MPPT charge controllers, inverters, batteries and ancillary surge protection equipment.

The installation will have a DC-coupled configuration, with a 48 VDC DC busbar where the MPPT controllers/chargers and batteries will be wired. The DC connection for the inverters will also be wired to the DC busbar.

1.3.2. Mechanical design and exposure to environmental conditions

Support structures and mounting devices must comply with applicable building codes, regulations and standards. Particular attention should be paid to wind loads on photovoltaic generators and their structures. All structures, frames, bolts, nuts, guy wires and fasteners must be made of corrosion-resistant materials.

1.3.3. Safety aspects

Protection against electric shock:

Protection against electric shock on the DC side must be achieved by best practice and international standards and by components and systems classified as Class II or "better". For the AC side, protection by double or reinforced insulation between any live conductor and any earthed or exposed conductive part is required.

Protection against overcurrent:

The inverter cable overcurrent protection must be installed between the battery and the inverter as close as possible to the battery.

In the PV generator, overcurrent protection is required in the strings: fault currents due to short circuits in the modules, in the junction boxes or in the module wiring or to earth can cause an overcurrent in a PV generator. PV modules are limited sources of current, but they can be subject to overvoltages caused either by multiple parallel

adjacent strings or by external sources or both. For this reason, current protection of each string is mandatory.

Protection against the effects of lightning and transient overvoltage

The level of protection of electrical installations is important for the safety of people, installations and equipment. The level of protection of electrical installations depends on many aspects, such as the type of installation (overhead/underground), the network, etc. The most important factors are described below. The most important factors are described below:

- Equipment electrical insulation material.
- Characteristics of overvoltage protection devices.
- Appropriate earthing system.

Overvoltage protection devices installed must comply with international standard IEC 61643-11.

1.4. REFERENCE SPECIFICATIONS

1.4.1. Photovoltaic generator:

The photovoltaic generator or field consists of a batch of bi-glass or glass/teflon encapsulation photovoltaic modules interconnected in series and in parallel, and possibly grouped into sub-fields; these modules will be made of monocrystalline silicon with parallel protection diodes. Systems comprising amorphous silicon or other thin-film photovoltaic generators are excluded.

Modules in the same field will be of the same category and interchangeable, i.e. of the same rated power and the same size.

The module frames will be made of anodised aluminium to guarantee high mechanical resistance. All modules will be completely identical and interchangeable. A single model of PV module will be installed in all plants.

Each PV module must be fitted with a nameplate containing at least the following information:

- manufacturer's name, monogram or symbol,
- peak power (Wp),
- short-circuit current (A),
- open circuit voltage (V) for STC conditions (standard test conditions),
- maximum permissible system voltage for which the module is suitable,
- protection class,
- serial number,

1.4.2. Solar module support structure

All components of the module supports must be made of corrosion-resistant material(s). Care should be taken to eliminate any risk of electrolytic couple corrosion.

The foundations of the supporting structure must be constructed in accordance with national and local requirements and must be designed according to the local soil characteristics. Where concrete bases are required, they must be designed to receive the anchorages for the support frames. The support frame must be easy to install and maintain.

In all cases, the modules must be installed away from any shading.

Fixing systems (nuts, bolts, washers, brackets) must be made of stainless steel.

1.4.3. Solar batteries or accumulators

The battery cells will be lithium iron, lead-carbon or equivalent for solar applications.

Batteries must comply with IEC 61427; IEC 60896; IEC 61056 or any other applicable standard.

- Rated voltage: 48V.
- Minimum fleet capacity: see quotation frames.

- Operating temperature: compatible with site climatic conditions.
- The rate of self-discharge at 25°C must not exceed 3% of the rated capacity per month.
- The battery tray must be thick and rigid enough to withstand transport and handling without damage.
- Les batteries seront livrées avec des capots de protection des cosses.

The battery cells must be interconnected by a flexible copper conductor or lead-plated copper busbars. This conductor (or busbar) must be sheathed. Unjacketed conductors will not be accepted.

To protect the battery, a disconnecting switch must be fitted on the DC BUS between the charger and the battery.

Batteries must be supplied with:

- Technical note indicating the operating mode, installation method and specific technical data (in English if possible),
- The following information will be provided:
 - Model.
 - Type.
 - Dimension (LXBXH).
 - Poids (kg).
 - Rated capacity.
 - Functional characteristics, service life in number of cycles,
 - Permissible charging and discharging current, permissible depth of discharge.
 - Temperature-dependent end-of-charge voltage where applicable.

1.4.4.2.4.4 Charging regulators

The tenderer may propose one or more regulators/chargers that meet the following overall specifications:

- Be of the MPPT (Maximum Power Point Tracker) type.
- Be compatible with the solar field (voltage and current).
- Battery voltage: 48V.
- A single model for a single installation is required.
- Regulator warranty period must be at least 5 years.
- The bidder must provide the technical data sheet for the proposed regulator/charger.

1.4.5.2.4.5 Inverter/chargers 5 kVA, 48V

The tenderer may propose one or more converters/chargers that meet the following overall specifications:

- Have a power rating of at least 5 kVA
- Parallel connection possible,
- Battery charging current at least equal to 70A
- Be compatible with the battery fleet (lithium battery)
- A single model for a single installation is required.
- The controller must be guaranteed for at least 5 years.
- The bidder must provide the technical data sheet for the proposed converter.

1.4.6. Wiring and Protection

The connecting cables will be coated copper of the VGV or RODV type in accordance with the HO7RN-F or 1000 R-02 V standard or equivalent.

If necessary, all underground passages will be made under a flexible sheath or PVC pipe of suitable diameter, at a minimum depth of 40 cm, resting on a bed of sand and covered by a warning grid.

Outlets for PVC ducts or pipes must be 30 cm above ground level and sealed with silicone resin. In all cases, unburied PVC insulation is prohibited. Conductor cross-sections must be such that voltage drops do not exceed the following values:

Liaison	Maximum voltage drop
Module-Module; PV field-Regulator/charger; Regulator/charger -Batteries; Batteries - Inverters	1%
Inverter – Receiver; Mains /Genset - Inverter	3%

All connecting cables used outside or inside the building must comply with current standards (insulation, UV resistance, mechanical strength, etc.), as must the conduits used to route the cables.

The cables must comply with the standard colour code (phase: red/brown/black, neutral: blue, PE: green/yellow). The AC output cable of the network converter must be class II. It should be sized to limit the voltage drop to less than 3% (ideally 1%). An AC circuit breaker will be fitted on this link, sized according to the Icc (breaking capacity) and Inom (rating) currents.

1.4.7.2.4.7 Earthing

The interconnection of grounds is of fundamental importance for the correct operation of lightning and overvoltage protection. All the metallic grounds of the equipment making up the electricity production installation must be interconnected and connected to a single earthing system.

The ground interconnection between the photovoltaic field and the electrical equipment will be made using copper cable with a minimum cross-section of 25 mm². The earth conductor will be laid in the immediate vicinity of the active conductors in order to limit the loop surface, which is detrimental in the event of a lightning surge.

All the building's conductive metal structures and those of the modules (support structures) will be earthed. The equipotentiality of the metal grounds of the electronic equipment (inverters, protection boxes, etc.) will be ensured as follows:

- if the distance between equipment and equipotential bonding bar is less than 2 m, each equipment earth will be directly connected to the equipotential bonding bar by earth conductors with a minimum cross-section of 10 mm².
- if the distance between the equipment and the equipotential bonding bar is greater than 2 m, each equipment earth will be directly connected to the common bare copper cable close to the equipment, which is itself connected to the equipotential bonding bar.

These connections should be made even if a PE conductor already links 2 pieces of equipment via a power cable. As a general rule, earth interconnections should preferably be made in a mesh rather than a star configuration, especially if the interconnection cables are long..

1.4.8. Protection against atmospheric overvoltages

The general protection system against atmospheric overvoltages will be detailed and explained in a specific note in the tender. This protection device must be of type I or type II depending on the keraunic level of the zone..

1.4.9. Signage

The electrical diagram of the installation and the layout diagram of the photovoltaic generator components, in the form of laminated documents, will be placed near the main switchboard.

APPENDICES: MODEL AND FORMS

Sample submission letter

(Tenderer's name)

(Date and place)

Subject: Submission letter

To

Mr Head of Mission of ALIMA Nigeria

Mr Head of Mission

Having examined, with a view to the installation of photovoltaic systems for the supply of electricity to Gashua pharmacy warehouse in Yobe state, the tender documents N°... and in particular, the Price Schedules and Quantities and Estimates Specification, Description of Works, We, the undersigned, propose to carry out and complete the Works and to repair all defects in accordance with the said Conditions of Contract, Price Schedules and Quantities and Estimates Specification, Description of Works, for the sum of *(amount in words and figures)* exclusive of tax and *(amount in words and figures)* inclusive of all taxes as detailed in the Estimated Detail attached to this tender.

We undertake, if our tender is accepted, to commence the Works as soon as possible after receipt of the service order notifying the approval of the contract by the Competent Authority and to complete all the Works covered by the Contract within a period of *(specify period in number of days)*

We agree to remain bound by this offer for a period of **90 days** from the date fixed for the submission of tenders, and this offer may be accepted at any time prior to the expiry of the said period.

We undertake to guarantee the equipment for the following periods. During this period, we undertake to replace or repair any equipment that fails under normal conditions of use:

- ✓ Solar panels: *(indicate number of years' warranty)* years
- ✓ Batteries: *(indicate number of years' warranty)* years
- ✓ Regulators/chargers: *(indicate number of years' warranty)* years
- ✓ Inverters: *(indicate number of years' warranty)* years

We certify that the information, declarations, and descriptions contained in our application file, consisting of an administrative offer, a technical offer, and a financial offer, are true, correct, complete, and sincere, to the best of our knowledge.

Please note that you are not obliged to accept the lowest bid or to respond to any of the bids you receive.

Yours sincerely.

Signed in ... on2025

Signature

Name of authorized representative

UNIT PRICE SCHEDULE AND QUOTATION FRAME

Unit price schedule

#	Description	Unit	Prices in figures	Prices in words
1	550 Wp monocrystalline solar panels	U		
	This price includes the supply and installation of monocrystalline photovoltaic panels, including connectors, junction boxes and all installation accessories.			
2	Solar panel support	U		
	This price includes the supply and fitting of supports for the panels. The panels will be riveted to the support, preferably fixed to the roof.			
3	120A MPPT Solar Charge Controller Regulator With LCD Display	U		
	This price covers the supply, installation and configuration of a 120A MPPT Solar Charge Controller Regulator With LCD Display. The controller must be compatible with lithium batteries and must support at least 6,6kWp power			
4	10kWh, 48V lithium battery for solar applications	U		
	This price includes the supply, installation and configuration of lithium batteries, including battery holder, auxiliary installation equipment and any other incidental costs. The batteries must have at least 6000 cycles at 90% discharge and connected in parallel.			
5	48V, 5kVA hybrid inverter charger	Ens.		
	Supply, installation and configuration of a 5kVA, 48V hybrid inverter-charger with 100A MPPT, supporting a PV power of at least 6 kWp and compatible with lithium batteries			
6	DC wiring	Ens.		
	This price includes all DC cabling (Modules-Controllers, controllers-Batteries). The cables will be sized in accordance with current standards and for a maximum voltage drop of 1%.			
7	AC wiring	Ens.		
	This price includes all AC cabling (Inverter-Receiver and Network/GE-Converter...) and the revision and correction of the existing installation (including the separation of the circuit of the air conditioners of the guest house building which must not be on the solar installation but only on the the city power and the generator). The cable will be dimensioned for a maximum voltage drop of 3%.			
8	Protection	Ens.		
	This price includes all DC and AC protection equipment in accordance with current standards and regulations, including earthing and solar surge arrestors). It will include protection upstream of the controllers, a battery isolator and protection at the AC input and output of the inverters, among other things.			
9	Technical room conversion	Ens.		
	Conversion of an existing room (grid enclosure) into a technical room dedicated to equipment. The room must be secure and have regulated access. Bidders must visit the site in order to prepare their offer.			
10	Electricity meter	U		

	This price includes the supply and installation of an electrical meter for monitoring energy consumption. One meter will be installed at the AC input of the inverters and another at the AC output of the inverters.			
11	Automatic change over switch	U		
	Supply and installation of a 100A automatic change over to ensure continuity of electricity supply from the grid in the event of a failure of the inverter.			

Quotation Frame

#	Description	Unit	Quantity	Unit price	Total price
1	550 Wp monocrystalline solar panels	U	24		
	This price includes the supply and installation of monocrystalline photovoltaic panels, including connectors, junction boxes and all installation accessories.				
2	Solar panel support	U	24		
	This price includes the supply and fitting of supports for the panels. The panels will be riveted to the support, preferably fixed to the roof.				
3	120A MPPT Solar Charge Controller Regulator With LCD Display	U	1		
	This price covers the supply, installation and configuration of a 120A MPPT Solar Charge Controller Regulator With LCD Display. The controller must be compatible with lithium batteries and must support at least 6,6kWp power				
4	10kWh, 48V lithium battery for solar applications	U	4		
	This price includes the supply, installation and configuration of lithium batteries, including battery holder, auxiliary installation equipment and any other incidental costs. The batteries must have at least 6000 cycles at 90% discharge and connected in parallel.				
5	48V, 5kVA hybrid inverter charger	Ens.	2		
	Supply, installation and configuration of a 5kVA, 48V hybrid inverter-charger with 100A MPPT, supporting a PV power of at least 6 kWp and compatible with lithium batteries				
6	DC wiring	Ens.	1		
	This price includes all DC cabling (Modules-Controllers, controllers-Batteries). The cables will be sized in accordance with current standards and for a maximum voltage drop of 1%.				
7	AC wiring	Ens.	1		
	This price includes all AC cabling (Inverter-Receivers and Network/GE-Converter...) and the revision and correction of the existing installation (including the separation of the circuit of the air conditioners of the guest house building which must not be on the solar installation but only on the the city power and the generator). The cable will be dimensioned for a maximum voltage drop of 3%.				
8	Protection	Ens.	1		
	This price includes all DC and AC protection equipment in accordance with current standards and regulations, including earthing and solar surge arrestors). It will include protection upstream of the controllers, a battery isolator and protection at the AC input and output of the inverters, among other things.				
9	Technical room conversion	Ens.	1		
	Conversion of an existing room (grid enclosure) into a technical room dedicated to equipment. The room must be secure and have regulated access. Bidders must visit the site in order to prepare their offer.				
10	Electricity meter	U	2		
	This price includes the supply and installation of an electrical meter for monitoring energy consumption. One meter will be installed at the AC input of the inverters and another at the AC output of the inverters.				
11	Automatic change over switch	U	1		

Supply and installation of a 100A automatic change over to ensure continuity of electricity supply from the grid in the event of a failure of the inverter.				
GRAND TOTAL EXCL. VAT				
VAT				
GRAND TOTAL INCL. VAT				