

REQUEST FOR TENDER

ENGINEERING PROCUREMENT AND CONSTRUCTION FOR STAND-ALONE SOLAR-PV MINI-GRID

Village of Mpaka

- Balama District, Cabo Delgado Province -

Rural Electrification Project

Tender Code: N. AVSI/MOZ/AICS/011387/ITA/01-2020

Location: Mozambique



Date of Publication: January 11th, 2019

Deadline for Submission: February 9th, 2020

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1. GENERAL CONDITIONS

1.1 Contracting Authority

The contracting authority of this Tender is AVSI Foundation (“AVSI”), a non-governmental organization, ONLUS (non-profit and social utility organization), created in 1972 and committed to the development of 107 development cooperation projects in 30 countries around the world. AVSI has been present in Mozambique since 1999 providing support to educational projects by the local partner Khandlelo. In 2010, inaugurates the Maputo headquarters and in 2012 the field office in Pemba, Cabo Delgado province. By order of the Mozambican Ministry of Foreign Affairs and Cooperation, AVSI is authorized to work in the provinces of Maputo and Cabo Delgado in the energy, education, water and environment sectors. AVSI is a member of FOCADE (Cabo Delgado Non-Governmental Organizations Forum) and the Global Alliance for Clean Cooking⁵⁵.

1.2 Rules governing the Contract

The Contract must be performed and interpreted according to Italian law. The parties commit to sincerely perform their engagements to ensure the good performance of this Contract. In case of litigation or divergence of opinion between the contracting authority and the Contractor, the parties will consult each other to find a solution. If agreement is lacking, the Rome courts are the only courts competent to resolve the matter.

In addition to the above, this Contract shall be also governed by the following Italian laws:

- Italian Decree 2 November 2017, n. 192

1.3 Definitions

The following definitions shall be used for the purposes of this Contract:

- Contractor: the Tenderer to whom the Contract is awarded;
- Contracting authority: AVSI, represented by the Resident Representative of AVSI in Mozambique;
- Contract manager: the official or any other person who manages and controls the performance of the Contract;
- Corrupt practices: the offer of a bribe, gift, gratuity or commission to any person as an inducement or reward for performing or refraining from any act relating to the award of a contract or implementation of a contract already concluded with the contracting

authority;

- Days: in the absence of any indication in this regard in the tender documents and the applicable regulations, all days should be interpreted as calendar days;
- General Implementing Rules: rules given in the “Italian Decree 2 November 2017, n. 192” establishing the general rules for the procurement procedures and performance of contracts executed abroad, according with “Art.1, 7, Legislative Decree 18 April 2016, n. 50.”
- Litigation: court action;
- Option: an accessory element which is not strictly necessary to the performance of the Contract, but which has been introduced on demand of the contracting authority or on the initiative of the Contractor;
- Technical specifications: a specification in a document defining the characteristics of a product or a service;
- Tender: the commitment of the Tenderer to perform the Contract under the conditions that he has submitted;
- Tenderer: the economic operator that submits a Tender;
- Tender documents: this document and its annexes and the documents it refers to;
- Variant: an alternative method for the design or the performance that is introduced either at the demand of the contracting authority, or at the initiative of the Contractor.

1.4 Proprietary information

AVSI considers this Tender and all related information, either written or verbal, which is provided to the Tenderer, to be proprietary to AVSI. It shall be kept confidential by the Tenderer and its officers, employees, agents and representatives. The Tenderer shall not disclose, publish, or advertise any of the content of this document as well as any related information to any third party without the prior written consent of AVSI.

1.5 Enquiries

All communications and attempts to solicit information of any kind relative to this Tender should be channeled to:

Contact Person: Anna Benetello

Title: Project Coordinator

E-mail: anna.benetello@avsi.org

1.6 Tender validity period

Tenders submitted will be valid for a period of 120 days counted from the submission date.

The Tenderer accepts that AVSI reserves its right to not award the tender within the above- mentioned period of time.

1.7 Joint ventures or consortia

Tenderers must fulfill all the eligibility criteria as required in the following paragraph. If a Tenderer considers that it does not have all the expertise and eligibility criteria for the assignment, it can apply in joint venture or consortium with other firms, as appropriate. The maximum number of firms in joint venture or consortium is three (Leader and two Partners). Tenderers which apply as joint ventures or consortia should indicate the Leader firm.

1.8 Eligibility of the Tenderer

In order to be eligible, the Tenderer must:

- have a total turnover for the last 5 years equal or higher than Euro 5 million **and**
- be ISO 9001, ISO 14001, OHSAS 18001 compliant (or equivalent for non EU companies) **and**
- have developed at least 5 solar-PV plants with power capacity between 100 kWp and 5 MWp each in the last 5 years as General Contractor or main subcontractor **and**
- have constructed at least 1 off-grid solar-PV plant with storage in Sub-Saharan Africa with at least 80 kWp power as General Contractor or main subcontractor **and**
- have previous experience in LV line design and construction **and**
- be a registered Mozambican firm (at least one firm, in case of joint ventures or consortia) **and**
- ensure that Mozambican firm is in charge to execute at least 30% of the total financial proposal, in case of joint ventures or consortia **and**
- have all the documents required in section 1.10.

1.9 Instructions for submission

- Tenders should be submitted:
 - By email to the address maputo@avsi.org, by no later than 12:00 hours (CET time) on Sunday, **9th February 2020**; or
 - In hard copies in closed envelopes. The sealed envelope must be delivered to AVSI Foundation, Av. Paulo Samuel Kankhomba 483, Maputo, Mozambique, by no later than 12:00 hours (CET time) on Sunday, **9th February 2020**.
- The deadline for submission, company name, return address and Tender Code AVSI/MOZ/AICS/011387/ITA/01-2020 must be endorsed on the envelope.
- If a courier service company is being used for delivery of the tender document, the tender code AVSI/MOZ/AICS/011387/ITA/01-2020 must be endorsed on the delivery note/courier packaging and the courier must ensure that documents are delivered to AVSI headquarters.
- No Tender received by telegram, telex, email, facsimile or similar medium will be considered.
- Amended tenders may be sent in an envelope marked “Amendment to tender” and should be delivered to AVSI headquarters before the deadline for submission.

1.10 Tender submission forms and documents required

Tender must be submitted in accordance with the Instructions for submission.

- All the documentation submitted in response to this Tender must be in English.
- The Tenderer is responsible for all the costs that it shall incur related to the preparation and submission of the Tender application.
- Tenders submitted by Companies must be signed by a person or persons duly authorized thereto by a resolution of the Board of Directors, a copy of which resolution should be duly certified and submitted with the Tender.

Tenderer should check to have enclosed all the documents required as follows:

- A valid tax clearance certificate (per each entity, in case of joint ventures or consortia);
- A valid incorporation certificate (per each entity, in case of joint ventures or consortia);
- In case of joint ventures or consortia, a Letter of Intent signed by all the entities willing to formally register the joint venture or set up the consortium in case of Contract

awarding;

- For the Mozambican firm only:
 - Certified copy of the Company License specifically for this type of contract
 - Original or certified copy of the Certificate of discharge of National Institute of Social Security (INSS)
 - Original or certified copy of the Certificate of discharge issued by the Finance department (IRPS)
 - Original or certified copy of the Certificate that the company is not involved in proceedings relating to bankruptcy, judicial settlement, liquidation or composition with creditors (issued by Tribunal Judicial)
 - The documents from INSS, IRPS e by the Tribunal Judicial) can be all substituted by the certified copy of the registration in the State Register of Suppliers (UFSA)
 - Certification of compliance with the CE norms applicable in the EU directives;

- With reference to sections 3.5, 3.6, 3.7, a list of the proposed equipment must be provided as well as device datasheets and warranty conditions related to all the items detailed in the above-mentioned sections.

- All the following Exhibits properly filled in:

Exhibit A - Acceptance of Tender conditions and Tenderer's details

Exhibit B - Construction capability of Tenderer

Exhibit C - Experience of project team

Exhibit D - Financial capabilities of the Tenderer and other participating firms

Exhibit E1 - Price proposal

Exhibit E2 - Price declaration form

Exhibit E3 - Payment structure

Exhibit F - Execution timing

Exhibit G - Experience in mini-grids

Exhibit H - Methodology and project design

Exhibit I - AVSI Eligibility Declaration

Exhibit J - Adherence to the Code of Ethics

2. TERMS OF REFERENCE

2.1 Background

To develop its projects, AVSI meets the following criteria:

- starting from the value of people, never defined by the circumstances in which they live;
- always consider the family and community context of the person;
- accompany and be accompanied, recognizing that we all have the same human experience in common;
- involve all stakeholders: foster the collaboration of all actors, beneficiaries, operators, partners, donors and the private sector;
- learn from the experiences and build on the lessons learned.

On 1 November 2018 the AVSI Foundation started implementing the project “ILUMINA: Access to energy for local development and women's empowerment” in Cabo Delgado Province, with funding from the Italian Agency for Development Cooperation.

The overall objective of the project is to improve living conditions and strengthen the resilience of vulnerable populations against calamities, both climatic and unnatural, in the provinces through access to energy.

The specific objective of the program is to promote local development and women's empowerment by improving access to renewable energy sources.

Among others, one of the main activities of the program is the installation and management of a solar mini-grid in the Balama district of Mpaka village. A pre-assessment was carried out jointly with FUNAE and local institutions. The strategy defined in the project aims to promote the productive use of energy by local entrepreneurs (both individual and collective) and access to household electrical equipment. AVSI's role is to ensure growing demand for energy along with ability to pay. Specifically, the activities envisaged by the project to promote productive use under the project outcome “Capacity building among local actors of development and socio-economic empowerment for women and men” are the following:

- Promotion of savings groups;

- Consolidation and development of local commerce. This activity provides training on entrepreneurship and constant monitoring throughout the project to selected entrepreneurs;

Promotion of associations.

This strategy is based on the Theory of Change (figure 1).

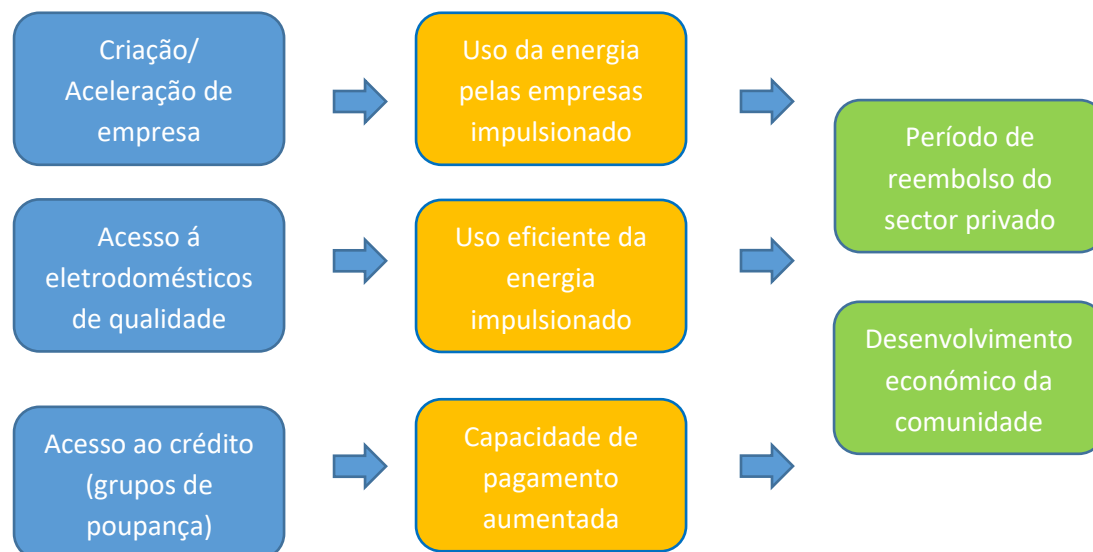


Figure 1.

2.2 Scope of work

The project aims at providing access to clean, reliable and affordable electricity to the whole community of the village of MPaka, Balama district, Cabo Delgado province, Mozambique, through a stand-alone solar-PV mini-grid.

The project will strongly impact local productivity, contributing to the reduction of poverty as well as population's vulnerability to climate change, for a real sustainable economic development of the local community.

The purpose of the procedures herein is to establish guidelines and requirements for the mini-grid construction based on the detailed specifications for the Tenderer. The mini-grid includes three systems: (i) off-grid hybrid (solar PV-diesel) power generation plant, (ii) distribution grid and (iii) last-mile connections (hereafter the “Mini-grid”).

2.1.1 Main activities

The assignment includes the following main activities:

- Design, sizing, provision and installation of the photovoltaic solar plant, including civil works, fencing, surveillance and monitoring control rooms, protection and manoeuvre elements, office box and auxiliary services, storage system and back-up generator;
- Provision and installation of the 3-ph low voltage (LV) distribution line according to Mozambican regulations and technical requirements;
- Provision and installation of the last-mile connections to the mini-grid service, including metering system and buildings wiring;
- Testing and commissioning of the entire mini-grid;
- Training on operation and maintenance procedures along with the handbooks and safety protocols in Portuguese language, focused on preventive and corrective maintenance of the plant.
- Three (3) months technical assistance after the mini-grid commissioning;
- Provision of all necessary spare parts for the correct performance of the plant and grid for at least 1 year (excluding fuel for genset).

2.1.2 Location

GPS coordinates	
Plant plot	13.190729°S, 38.542207°E
Village center	13.192230°S, 38.544942°E
Plot dimensions	
Area	5.000 m ²
Perimeter	300 m



Figure 1- Aerial view of the village of Mpaka



Figure 2 - Generation plant's area

2.3 Description of the systems in brief

Power generation plant: a photovoltaic solar generation plant with a capacity of 150 kWp is associated with a 70 kW diesel generator, to support peak loads and ensure complete reliability. With an annual gross production of approximately 250 MWh, the plant will be able to provide a 24-hour service through the energy storage system composed of 300 kWh net capacity lead acid batteries. Moreover, thanks to the modular technology of its components, the plant will be able to follow demand growth in the medium term. Advanced systems of Energy Management Systems (EMS) and monitoring systems will be installed to control the generation and distribution system performance in order to minimize diesel usage and energy losses.

Smart distribution grid: the purpose of the Tender is to provide access to energy to a substantial part of the villagers of Mpaka. In order to favor the economic and productive development of the area, electricity will be supplied to customer in single-phase AC type. The network will have a low voltage 3 phase main branch 1,600 m long and secondary branches accounting for 5,600 m. The entire grid will be 3-phase aerial type, built on wooden poles. Protection devices will be installed along the line according to the

standards and regulations in force in Mozambique. Additional systems can be requested from the Contractor if necessary.

Last-mile connections: Smart Energy meters are required to allow pre-paid payments, cashless operations through mobile money and cloud billing, users consumptions remote monitoring. Smart meters will be installed on top of the poles along the distribution network. A fundamental aspect of the connections of the utilities, in addition to the earthing and the installation of ordinary safety devices in line with the regulations in force in Mozambique, is that the project includes the internal wiring of the connected buildings to ensure safety standards and an appropriate use of electricity supply.

2.4 Financial proposal

A single Tenderer will be awarded the Contract.

Tenders higher than Euro 530,000 will not be considered.

The financial proposal should include:

- local VAT (17%) applied to any good/service acquired in Mozambique;
- export taxes, if any;
- goods provision, packing, transport and installation breakdown;
- personnel-related expenses, including three (3) months technical assistance post commissioning;
- any rent of heavy machinery, if needed.

The financial proposal should not include:

- Mozambican VAT applied to imported goods from EU and non-EU countries;
- Custom clearance taxes.

2.5 Responsibilities

AVSI is responsible to obtain any license and permission to authorize the above mentioned activities and will assure access to site. and required permits to the Contractor before the commencement of the Works.

The Contractor is responsible to obtain any local authorization enabling contractors to operate in construction works to submit the tender.

The Contractor is responsible to coordinate and control all procurement logistics, design and construction activities.

The Contractor is responsible to prepare the Detailed Engineering folder, review and verify all design works that must be approved by AVSI before the construction phase.

AVSI can execute tests and controls during all phases of the assignment.

During the Provisional Acceptance Certificate (PAC) and the Final Acceptance Certificate (FAC) procedures, AVSI will test and approve the construction. The procedures for PAC and FAC will be detailed in the Contract.

3. TECHNICAL SPECIFICATIONS

Tenderers should only consider components that respect **at least** the following technical features. However, any solution proposed by the Tenderer in order to improve the mini-grid's performance is admitted and will be taken into consideration in the evaluation criteria "g. Methodology and project design".

The minimum technical characteristics of equipment should be met. It is important to highlight that, since each component works together with the others, it is therefore necessary to select them in an integrated way. This implies that all the components should all meet the minimum technical required standards and be perfectly adapted to the functioning of the integrated generation and distribution systems.

AVSI reserves the right to change any component which does not comply with the minimum service level, even after awarding the Tender and without bearing any extra cost if duly justified.

3.1 License, permit and authorization procedures

AVSI will provide all the necessary licenses, permits and authorizations related to the mini-grid construction to the Tenderer before the sign of the Contract. The Tenderer will provide all the necessary local authorization to operate in construction works before the sign of the Contract.

3.2 Project design and construction

- The Tender should be submitted on the basis of a final design of the plant, according to this Technical Specifications. A comprehensive description of the final design of the mini-grid should be provided in the exhibit H along with the main components' datasheets and warranties.
- The detailed design will be developed by the winner after the Award Notice and will be subjected to the approval of AVSI.
- "As Built Engineering" documents will be provided after final testing of the plant.
- All changes related to the detailed design during the construction phase must be approved and agreed by AVSI.
- Design changes will be evaluated by AVSI for its effect on constituent parts and delivered products.

- Design changes will be also reviewed and verified by AVSI as required, prior to implementation.
- Compliance with the Environmental, Social, Health and Safety Requirements as detailed in the Environmental Impact Assessment that will be provided to the Tenderer before the sign of the Contract.
- **The Contract must be executed within a maximum of 9 months from the Award Notice.**
- Any improvement of execution timing will be taken into account under the relevant evaluation criteria.
- The final testing will verify the proper operation of the PV power system and storage as well as the distribution lines in various power conditions, electrical continuity and connections between modules, grounding system and insulations of electrical systems.
- Involvement of people from local community in the construction works, clearly specified in terms of man-days, is an added value that will be taken into consideration in the evaluation criteria “g. Methodology and project design”.

3.3 Equipment general requirements

The following aspects should be taken into consideration in developing the offer since they are requirement the assignment should comply with:

- The Tenderer will guarantee compliance with the characteristics indicated in these Technical Specifications including factory, supplier and installer warranties, and the corresponding values must comply with benchmarks.
- All the equipment must be new, unused and able to provide a reliable, adequate and durable service for the operating conditions in the village of Mpaka.
- Prototypes or products in the development stage will not be accepted.
- All provision will be made using the same type, brand and model for each genre of equipment and its accessories, including manufacturer, supplier and installer warranties. This requirement is based on the need for parts and units to be replaced, facilitating the maintenance procedures and provision of spare parts.
- The assembly of all the units and their components, will be performed in such a way

to obtain the shortest time and lowest cost for their installation, replacement and general maintenance.

- The fact that an equipment has been accepted for having the required characteristics will not exempt the supplier from solving the defects that may appear during or after the construction, installation or commissioning. Replacement will be required for a new and unused unit if the defects which are manifested are not repairable, by maintaining the original warranties.
- The provision, transport, installation and commissioning of the equipment in the corresponding place, will be in charge upon Contractor's responsibility, who will ensure through adequate packaging the integrity and durability of the equipment, protected to resist to the action of the elements and external agents. The expenses caused by replacements of equipment and / or components will be the sole responsibility of the Contractor.
- All the main components should be properly identified in the Tender, with brand, model, manufacturer, warranty and all relevant technical characteristics.
- The Contractor must provide all the necessary spare parts to ensure correct operation of the project for at least 1 year, excluding fuel for genset.
- Containerized solutions should be used for the installation of the battery banks (a single battery bank will also be accepted), charge regulators, electrical switchboard and protections, power electronics, monitoring and control systems.

3.4 Main technical figures and requirements

The solar-PV system was sized to achieve a renewable energy share close to 100% throughout the year considering the estimated maximum daily demand and average daily irradiation.

The Technical Specifications are guidelines for the design, provision and installation of a mini-grid system, as defined in section 2.2.

MAIN MINI-GRID TECHNICAL FIGURES		
	Unit	Value
Components		
Solar-PV generation capacity	kWp	150
Diesel generation capacity (as backup)	kW	70

Battery NET storage capacity – type lead acid batteries	kWh	300
Minimum battery DOD	%	50
Low voltage AC distribution grid – main line	m	1,600
Low voltage AC distribution grid – secondary branches	m	5,600
Last-mile connections	n°	560

The systems must be able to:

- Ensure the provision of energy 24 hours/day;
- Ensure the minimum annual reliability of 355 days of annual service (97%);
- Ensure a quality of electricity supply according to parameters defined in this technical specification;
- Target a share of renewable energy close to 100% throughout the year considering conditions of estimated maximum daily demand and average daily sunshine, using a diesel generator as a back-up in case of extreme weather conditions and extraordinary maintenance; ensure at least 95% of energy from renewables including such conditions;
- Have a communication system between all the components of the plant to allow automatic switch and recharge of generation set;
- Have a remote readable monitoring system for the main generation parameters.

3.5 Power generation and storage systems

3.5.1 Land preparation

The land cover is expected to be free of vegetation and homogeneous. Thus, before the installation phase, the Contractor should proceed to the cleaning and correct levelling of the land, to leave it in appropriate conditions for the realization of the same.

The design and the realization of all civil works must be in accordance with the latest editions of EU quality standards or Mozambican if higher.

3.5.2 PV Panels

Type: mono or polycrystalline silicon modules.

Peak power > 250 W

Efficiency >16%.

Life time: >20 years.

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Warranties: Linear performance 90% (after 10 years) and 80% (after 25 years)

Spare parts: 1%.

Additional requirements:

- PV modules must have a certificate of compliance in accordance with the following international standards: IEC 61215, IEC 61730, IEC 61701.
- The minimum number of cells series connected for each module should be 60 and able to guarantee the nominal power in standard conditions (irradiance 1 W/m², air mass 1.5 spectrum and 25°C);
- Each module must have an anodized aluminum frame and the cells must be properly encapsulated in a suitable material. The top cover of the module must be tempered glass;
- Modules should be Potential Induced Degradation (PID)-free certified;
- Each module must have its corresponding junction box attached to the back of the module. It must have a cover, be waterproof and have a minimum protection IP 67 according to IEC 529. Bypass diodes must be installed. The boxes must have the corresponding electrical polarities indicated in low relief or by indelible paints;

3.5.3 Foundations and supporting structures

Supporting structure: galvanized steel

Foundations: the Tenderer can propose its best solution.

Life time: >30 years.

Spare parts: not required.

Additional requirements:

- Prior to the execution of this work, the Contractor shall provide a calculation report with dimensioning of the foundations and supporting structure to local wind

conditions. This document must be signed by a qualified professional engineer registered and authorized in Mozambique.

3.5.4 Control and Monitoring systems

Type: remote monitoring of the plant, output power counter, irradiation and temperature sensor. Pyranometer and solarimeter shall be included since required for performance tests.

Life time: >15 years.

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Warranties: to be specified in the Tender.

Additional requirements:

- Data coming from the system should be able to be visualized in a local SCADA system with its respective HMI through a PC or notebook located inside the assigned container.
- SCADA system should show all the usual operational data and must also be able to be viewed remotely. The system must keep records of historical data of at least one (1) year.
- The Contractor should carry out the provision, installation and configuration of all the equipment related to the control system and SCADA system (including the software licenses valid for a period of 5 years), the complete monitoring station with its respective HMI and a weather station that allows to perform the required measurements.
- At least the following data must be visualized and stored:
 - System operation time;
 - Power flow of battery banks;
 - Diesel generator power flow;
 - Instant CA demand;
 - Instantaneous output power of the photovoltaic generator and its respective sub-generators;
 - Instantaneous power of the diesel generator;
 - Instantaneous power demanded by the load (total and per phase);
 - Effective capacity of battery banks;
 - Input power to battery banks;

- Output power of battery banks;
- Performance;
- State of charge of battery banks and totals;
- Annual loading and unloading cycles;
- Estimated battery life;
- Average power and energy of the photovoltaic generator and its respective sub-generators (kW and kWh / day);
- Percentage of photovoltaic participation;
- Maximum power values;
- Minimum power values;
- Annual hours of operation (photovoltaic / diesel generator);
- Annual reliability;
- Monthly and annual operating costs of the diesel generator;
- Ambient temperature;
- Solar irradiance in the photovoltaic generator plane;
- History of special cases (cloudy days / network instability / emergency, etc.);
- Reliability histories;
- History of alarms and events;
- Daily and monthly records of irradiance, photovoltaic generation, thermal generation and demand. Both the monitoring and control systems must function in an integrated manner, using the same HMI. IEC 61724 should be considered as a guide for the measurement, analysis and exchange of data.

3.5.5 Field switchboards-DC side/Parallel switchboard-AC side

Switchboard-DC side: made of PVC for outdoor use, equipped with release coil, remote signalling of the arrester and the disconnecting switch.

Switchboard-AC side: equipped with emergency button

Life time: >20 years.

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Warranties: to be specified in the Tender.

3.5.6 DC/AC Inverter

Nominal AC output= 150 kW

Network frequency range: 50 Hz +/- 5 Hz;

Total harmonic distortion (DHT): ≤ 3%;

EU Efficiency ≥97%.

Life time: >20 years.

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Warranties: to be specified in the Tender.

Additional requirements:

- Inverter should be able to vary the active and reactive power injected into the network dynamically in order to keep the AC network within the established parameters and based on the AC loads;
- Active power limitation due to frequency shift and configuration through an ethernet interface;
- Capacitive and inductive active and reactive power control up to an adjustable offset factor of 0.8;
- Minimum degree of protection: IP 20 for indoor installation and IP 65 for an outdoor installation, according to IEC 529;
- Inverter must be able to deliver the maximum output power required for all environmental and weather conditions in the specific location;
- Power derating, insulation coordination and electrical distances due to height should be considered;
- Inverter must have a certificate of compliance with the following international standards: IEC 61727, or IEC 62109, or IEC 62116, or IEC 61000, or IEEE 1547;
- Access to setting parameters remotely via internet;
- Protection against atmospheric, transient and overvoltage discharges;
- For homogenization and spare parts, all grid connection inverters should be of a single type (same brand and model).

3.5.7 Diesel generator

Nominal Power: 70kW

Life time: >10 years.

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Warranties: to be specified in the Tender.

Additional requirements:

- Equipped with control and cooling systems (turbocharged and low temperature after cooled), soundproof or silenced container and oil leakage prevention;
- automatic starting by means of the control system: the system must turn on the generator automatically, either by the battery bank charge level, by hourly programming, according to the battery bank state of charge or any other specific event;
- Automatic auto-ignition battery recharge through auxiliary system.

3.5.8 Battery storage system

Type: Lead Acid batteries or more performing technology

Nominal capacity of the system: 400 kWh.

Net capacity of the system: 300 kWh

Nominal discharge power= >150 kW.

Depth of discharge= $\geq 50\%$.

DC-DC efficiency >85%.

System operating temperature= 0°C to +50°C.

Life time: >5000 cycles at 25 °C

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Warranties: 3 years

Spare parts: 1% of the capacity

Additional requirements:

- Battery system should have a certificate of compliance with the following international standards: IEC 60896-22, IEC 60695-11-10, IEC 61000.
- Battery manufacturer should be certified in compliance with ISO 9001 and ISO 14001;
- Thermal dissipation should be considered and calculated due to the variation of the convection coefficient by height in order to meet the minimum required capacity;
- Battery Management System (BMS) should communicate with the other equipment, limiting the charging current of the battery bank dynamically;
- Nominal capacity of the battery should refer to a discharge of 5h (C5 or better) and an environmental temperature of 25 °C. The maximum values of charge and discharge current depending on the capacity of the battery banks should never be exceeded in normal operating conditions;

- Monthly self-discharge should be less than 3% of the nominal capacity at 25 °C;
- Minimum degree of protection: IP 43, according to IEC 529;
- For homogenization and spare parts, all battery modules should be of a single type (same brand and model).
- Battery shall be installed in a A/C equipped room/container to ensure standard temperature conditions

3.5.9 Grounding and protections

- Civil works and earthworks must consider the installation of the grounding point to javelin electrodes, dynamic electrodes, plates or others that comply with current regulations;
- A surge protection and surge protection system of atmospheric origin (LPS) must be installed;
- Length and section of conductors should be adapted to the protection time and the short-circuit currents of the installation;
- Grounding works and Protection against atmospheric discharges should be carried out according to the following regulations: IEC 62305-1-2-3 (lightning protection), IEC 62305-4 (grounding system);
- The design and installation of all electrical panels must be carried out in accordance with IEC 60364-712.

3.5.10 Components arrangement on site

The Tender must specify its best technical solution related to the final arrangement on site of the components mentioned in the previous sections. The use of containers is recommended, even if alternative solutions can be proposed and justified in the “Exhibit H-Methodology and project design”. In this case, the Tender should include the cost of removing containers that will not be used for the component arrangement on site.

Requirements for components arrangement on site are the following:

- Power electronics, monitoring and control station, electrical switchboard, protections and auxiliary equipment should be installed in at least one waterproof

container/building.

- The Contractor may choose to install inverters inside these containers or outside. In case of outside installation, inverters should be properly protected allowing, in turn, a correct thermal dissipation.
- The following equipment should be installed:
 - Supply and installation of air conditioning equipment, of sufficient power for the internal volume and dissipation of installed equipment;
 - Air conditioning failure alarm equipment to the operator through the HMI;
 - Electrical installation (DC input / output, electrical panels, pipes, outlets, etc.) and indoor and outdoor lighting;
 - Vents with filters to protect the entrance of insects, dust, rain and snow;
 - Fire detection and warning equipment;
 - Fire extinguisher

3.5.11 Layout and security measures

The plant should be provided of internal paths for ordinary and extraordinary maintenance as well as of paved path from the gate to the electric machineries' building.

Plant area should be fenced to prevent animals and people trespassing during works and throughout operation lifetime.

Security lights are required along the fence internal perimeter as well as video surveillance through one 360-degree dome camera with night vision.

The layout of the plant should consider a future revamping of the plant up to 250 kWp.

In the same plot should be located the structure that will house the diesel generator, as well as its respective fuel tank and auxiliary systems.

There should be a free perimeter to avoid shading of the photovoltaic modules between 08:00 am and 6:00 pm throughout the year. It is also necessary the access and circulation of large cargo vehicles in the area adjacent to the gate, in order to allow loading and off-loading of all the equipment. Any additional costs shall be borne by the Contractor.

3.6 Distribution grid

The distribution grid should be made by 3-phase low voltage overhead conductors. The line should border public roads as much as possible. Any exception of poles in private areas will be duly authorized in advance and such agreements will be provided by AVSI.

In addition, a public lighting system should be installed on the distribution line's poles.

Item	Description	Quantity
Main distribution line (blue in the figure)	400V 3phase - aerial 50/70 mm ² aluminum	1,600 m
Secondary branches (green in the figure)	400 V 3phase - aerial 35 mm ² aluminum	5,600 m

Type: low voltage 3-phase line

System operating temperature: 40 °C (T_{env})

Max operating temperature: 80 °C (T_{max})

Conductor material: aluminium

Insulation material: PVC

Protection systems: max time of magneto-thermal circuit breaker: 0.02 seconds;
lightning projection systems.

Supporting structures: treated wooden poles, 2 m minimum depth, 40 m maximum distance

Additional requirements:

- Contractor is in charge of bush clearance to install the line, if needed.
- Appropriate ABC accessories should be provided, including insulators, termination and pole hardware accessories for ABC.
- 7/2.64 stays wire, stay rods, buckles, LV stay insulators and all the necessary accessories for a complete stay assembly should be included. Note that stays are not recommend on every pole, but should be installed on every T-Off, Terminal, derivation points and strain structures.

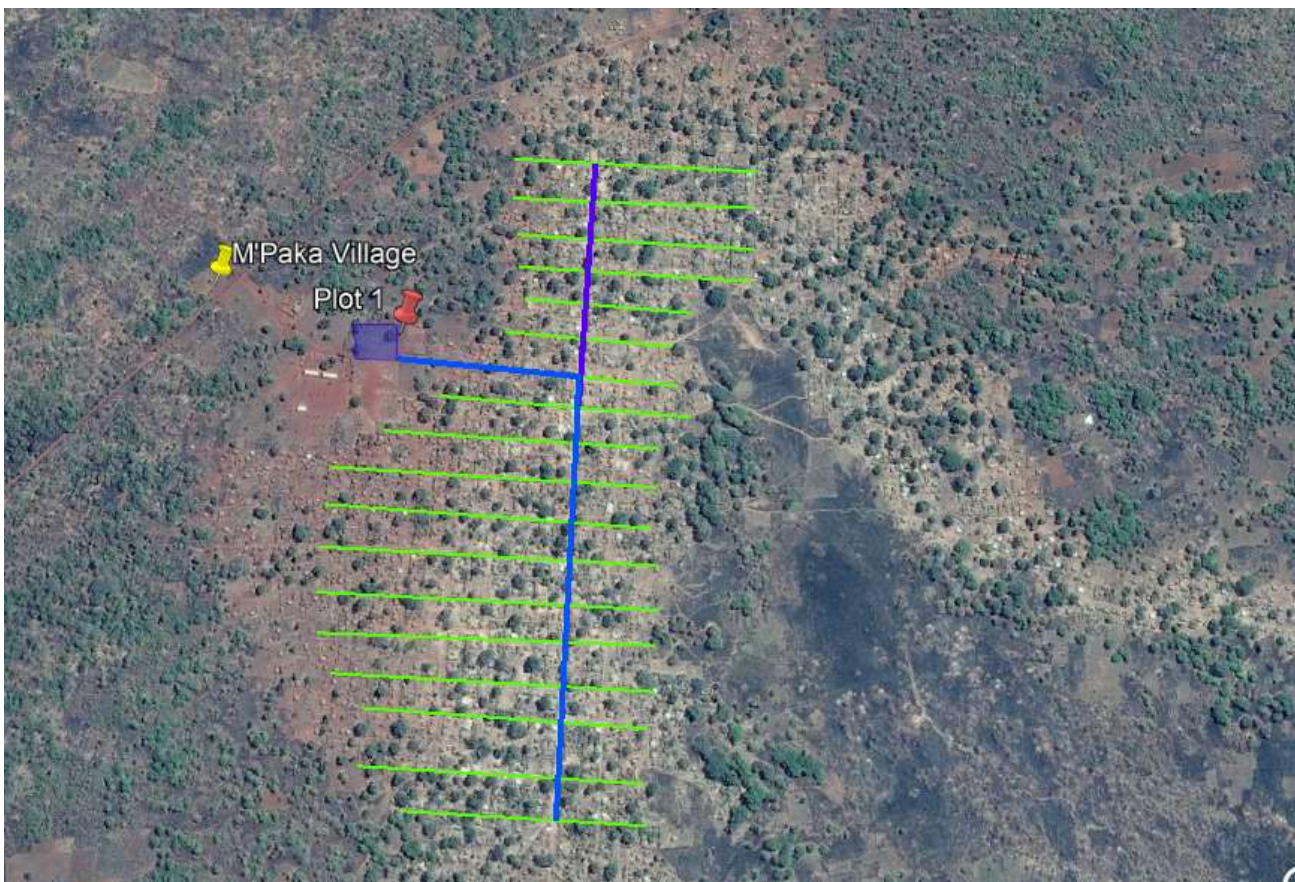


Figure 3- Distribution grid

3.7 Last-mile connections

Supply and installation of last-mile connections and building wiring includes the following main activities:

- supply and install aeral service cables from meter boxes to buildings;
- supply and install smart meters, including all the necessary installation materials;

Smart meters must be provided, installed and configured.

The smart metering system must be compatible with payment management via mobile money, such as pay-as-you-go systems.

Item	Description	Quantity*
Single-phase connection lines	230V 1ph	16,200 m (30 m x 540 connections)
Three-phase connection lines	400V 3ph	600 m (30 m x 20 connections)

Last-mile connections	Smart meters and house wiring	560 connections
<p>* a variation of 10% on the quantity, both on the total length of 1ph and 3ph lines as well as on the number of 1ph and 3ph connections, should be accepted without extra costs.</p>		

3.7.1 Smart meters

Current: 20A (1-phase AC meters for households and small-businesses); 60A (3-phase AC meters for medium-businesses)

Voltage: from 100 to 277 VAC (1-phase meters); from 230 to 415 VAC (3-phase meters);

Frequency: 50 Hz or 60 Hz.

Data transmission: wirelessly through radio mesh network; minimum range of 500 m

Origin: EU origin would be an asset in the evaluation criteria “e. Price Proposal”.

Base Station/s: able to manage up to 1.500 smart meters in a 3km radius.

Additional requirements:

- Server, Modem, Gateway or any other hardware necessary to a proper operation of the entire Smart-grid are included;
- Smart meters should be installed on top of the distribution grid poles by using steel supports anchored to the poles at a height of about 8 m from the ground;
- Smart meters should be enclosed in an ABS waterproof IP67 plastic box with lock and key.
- Software: remote monitoring; data reporting updated at least each 30 minutes; Application Program Interface (API) available to interact with software for mobile payment systems; software with dashboard for data monitoring is included.
- Software license valid for a period of 5 years.

3.7.2 Junction boxes

Type: insulated box for electrical applications, high resistant to chemical and atmospheric agents, protected against electrical shock, corrosion proof.

Material: ABS plastic enclosure.

Protection: IP > 65 (protected from low pressure water jets from any direction).

Size: minimum 6 connections per each box.

3.7.3 Cables from junction boxes to buildings

Type: PVC or XLPE insulated aluminum cable

Max Voltage: 600 V.

Size: 6/10 sqmm

3.7.4 Earthing

Earth wire: 16 sqmm single stranded copper conductor, 4 m length (on average)

Earth mat: copper mat, 600 x 600 minimum dimension, 3mm thick

Bed materials: charcoal and salt, 40 cm thick

3.7.5 Building wiring

Buildings are categorized into three types, depending on the building size and domestic or business use. Building types and related equipment required for wiring are summed up in the following table.

Item	Description	Quantity*
Building Type A	1 room domestic building	405 buildings
Building Type B	2 rooms domestic building or business building	155 buildings
* a variation of 10% on the quantity on the number of Type A and Type B buildings should be accepted without extra costs.		

Building Type A: 1 room domestic building

List of equipment to be provided:

- 1 safety circuit breaker (main switch)
- 1 external lamp-holder
- 1 internal lamp-holder
- 1 single pole switch 2 gang, with its MK box
- 1 double socket outlet, with its MK box
- 10 m of 1.5 mm insulated cable
- 5 m of 2.5 mm insulated cable

Building Type B: 2 rooms domestic building or business building

List of equipment to be provided:

- 1 safety circuit breaker (main switch)
- 1 external lamp-holder
- 2 internal lamp-holders
- 1 single pole switch 2 gang, with its MK box
- 1 single pole switch 1 gang, with its MK box
- 2 double socket outlets, with their MK box
- 15 m of 1.5 mm insulated cable
- 10 m of 2.5 mm insulated cable

Safety Circuit Breaker (main switch)

Type: Magneto-thermic breaker, 2 ways, AC current.

Rated Voltage: 240 V/400 V

Breaking capacity: 4.5 kA

Certification: CE

Additional Specifications: add strip connector to this item, if needed.

Earthly cage socket

Type: differential breaker, 2 ways, AC connected to the house earthing system

Sensitivity: 0,3 mA

Certification: CE

Sockets

Type: 13A double socket outlets.

Lamp-holders

Type: lamp-holders-pin type (for internal and external use).

Switches

Type: single pole switch 1 or 2 gang.

Wiring cables

Type for lighting points: 3x1.5sqmm PVC- insulated single core copper cables drawn in PVC conduits.

Type for power points: 3x2.5sqmm PVC- insulated single core copper cables drawn in PVC conduits.

3.8 Additional infrastructures for logistical purposes

3.8.1 Roads

The access road to the generation plant's site is in good conditions. Within the village area, the existent way is flat and there is no vegetation close to it. In order to allow for passage of trucks, a road width of at least 3 meters should be assured. The Contractor is responsible to assure access to the generation plant during the construction phase.



Figure 4 - Existent road within the village of Mpaka.

3.9 Goods transportation

The cost of goods transportation to the island should be specified separately in the bid (Exhibit E1), including the estimated timing required for this activity (Exhibit F).

If containers will not be used for components arrangement on site, the Tenderer should include the cost of removing containers.

4. TENDER EVALUATION

Tenders will be evaluated on the basis of the criteria explained in this section. The evaluation will be conducted in two phases, as described in the paragraphs 4.1 and 4.2.

a. Minimum requirements

Only Tenders that will obtain the minimum qualifying score of 70% in the following evaluation criteria should be considered for further evaluation on preference points.

CRITERIA	WEIGHT
a) Acceptance of Tender Conditions and Tenderer’s Details	Mandatory

b) Development and implementation capability	40%
c) Experience, Skills and Qualifications of the Project Team	20%
d) Financial resources	40%
TOTAL (a+b+c+d)	100%

b. Preference point system

All Tenders that will achieve the minimum qualifying score (acceptable Tenders) will be further evaluated in terms of the preference point system as follows:

CRITERIA	WEIGHT
e) Price (total price and payment structure)	70%
f) Execution timing	10%
g) Experience in mini-grids	10%
h) Methodology and project design	10%
TOTAL (e+f+g+h)	100%

c. Evaluation criteria

4.3 a) Tender conditions and Tenderer's details

This section should contain all the information relevant to the Tenderer or Tenderer's consortium as well as the responsibilities and role of each consortium member.

Please refer to **Exhibit A** to submit the relevant information.

4.3 b) Development and implementation capability

The Tenderer which will be responsible for the project development and implementation should describe its technical capabilities (domestic and international), its contacts with domestic and international construction companies for civil and electrical works, equipment and component suppliers (local and international) and any other resources which are relevant to perform the assignment.

The Tenderer must have experience in engineering design of PV power plants and energy storage systems as well as it must be able to deliver a design solution and tender packages for a turnkey project.

The Tenderer must provide minimum three (3) references of similar works done in the past five (5) years. In case of joint venture/consortium, each member should provide its references.

Please refer to **Exhibit B** to submit the relevant information.

4.3 c) Experience, skills and qualifications of the Project Team

The Tenderer's proposed project team must have relevant skills, qualifications and experience relating to the project scope of work. In order to prove the experience of the team, the Tenderer must submit CVs of the key project team members. CVs must clearly highlight the areas of experience/competence relevant to the tasks and objectives of the assignment as outlined above.

Please refer to **Exhibit C** to submit the relevant information.

4.3 d) Financial resources

The Tenderer's ability to secure financing for this project will be assessed on the success of the Tenderer's previous projects, volume of deals achieved, financial closure and commitments or expressions of interest from financing sources (if relevant), which the Tenderer has established for this project.

The Tenderer should submit their financial statements over the last three years, which should demonstrate their financial capability to secure the necessary financing for the project.

Please refer to **Exhibit D** to submit the relevant information.

4.3 e) Price proposal

The payment should be structured in respect of the advancement of the project. Payment proposals favouring a higher percentage of payment at the end of the project will be evaluated higher. **Tenders higher than Euro 560,000 will not be considered.**

As mentioned in section 3, EU origin would be an asset in this evaluation criteria.

Please refer to **Exhibit E1, Exhibit E2 and Exhibit E3** to submit the relevant information.

3.3 f) Experience in mini-grids

Tenderers with experience in mini-grids with power generation from renewable energy sources will be evaluated higher. Additional points will be given for such experience, if couple with storage system as well.

The Tenderer should provide minimum three (3) references of similar works done in the past five (5) years. In case of joint venture/consortium, each member should provide its references.

Please refer to **Exhibit F** to submit the relevant information.

3.3 g) Methodology and project design

The Tenderer must demonstrate thorough understanding of the project, its tasks and deliverables covering the following:

- Approach in terms of engineering design.
- Approach in terms of pricing.
- Approach in terms of company's structure and planning to complete the major project's activities and the integration of the expertise of the firms identified (in case of joint venture/consortium).
- Approach in terms of proposal preparation.

The Tenderer should provide its understanding of the project scope of work and explain how it will implement the main activities.

As mentioned in section 3, Tenderers should only consider components that respect **at least** the following technical features. However, any solution proposed by the Tenderer in order to improve the mini-grid's performance is admitted and will be taken into consideration in this evaluation criteria.

As mentioned in section 3.2, involvement of people from local community in the construction works, clearly specified in terms of man-days, is an added value that will be taken into consideration in this evaluation criteria.

Please refer to **Exhibit G** to submit the relevant information (maximum two pages).

EXHIBITS

Exhibit A - Acceptance of Tender conditions and Tenderer’s details

(to be filled in by the Lead Applicant in case of Consortium)

Request for Tender No (to be filled by AVSI).....

Name of Tenderer:.....

Authorized Signatory:.....

Name of Authorized Signatory:.....

Position of Authorized Signatory:.....

Email:.....

Tel No:.....

Mobile No:.....

Fax No:.....

By signing above the Tenderer hereby accepts full responsibility for the proper execution and fulfillment of all obligations and conditions devolving on him/her under this agreement as the Principal(s) liable for the due fulfillment of this contract.

Note: The Tenderer must complete all relevant information set out below.

TENDER STRUCTURE (tick the type of structure)	
Individual Tenderer	
Consortium	
Joint Venture	
Others (specify)	
TENDERER INFORMATION	

(for Individual Tenderer or Lead Applicant of joint venture/consortium)	
Name of the company	
Registration Number	
VAT registration number	
Contact person	
Telephone number	
Fax number	
Email Address	
Postal Address	
Physical Address	
Role and Responsibilities (in case of joint venture/consortium)	

PARTNER INFORMATION (only for Partners of joint venture/consortium)	
Partner 1	
Name of the company	
Registration Number	
VAT registration number	
Contact person	
Telephone number	
Fax number	
Email Address	
Postal Address	
Physical Address	



Role and Responsibilities (in case of joint venture/consortium)	
Partner 2	
Name of the company	
Registration Number	
VAT registration number	
Contact person	
Telephone number	
Fax number	
Email Address	
Postal Address	
Physical Address	
Role and Responsibilities (in case of joint venture/consortium)	

Signed.....

Exhibit B - Construction capability of Tenderer

Name of Tenderer:.....

The Tenderer must provide the following information:

Details of the Tenderer's current and past (over the past ten years) projects of similar type, size and complexity of the required services.

Applicant (Lead Applicant/ Partner 1/ Partner 2)	Client name	Project description	Project cost	Project period (start and end dates)	Description of service performed and extend of Tenderer's responsibilities	Name, title and telephone contact of client

Signed.....

Exhibit C - Experience of project team

(CVs for key staff: CEO, CTO, Site Manager) – max 2 pages each

Name of Tenderer:.....

- 1. Name and Title:**
- 2. Date of birth:**
- 3. Nationality:**
- 4. Project Assignment:**
- 5. Education:**
- 6. Years of Experience with the Project Assignment:**
- 7. Total Years of Experience:**
- 8. Brief Experience Related to Proposed Project Assignment:**
- 9. Brief Experience Related to Other Assignments:**
- 10. International Experience:**
- 11. Language Skills (specify the level):**
- 12. Other Personal Skills:**

Signed.....

Exhibit D - Financial capabilities of the Tenderer and other participating firms

Name of Tenderer:.....

The Tenderer (Lead Applicant and consortium members "if any") shall submit the data requested herein to demonstrate access to, or availability of liquid assets, lines of credit, and other financial resources to evaluate their financial capabilities. The Tenderer shall provide the following information for each consortium member.

The Tenderer shall summarize actual assets and liabilities in EURO equivalent (at the rates of exchange current at the end of each year) for the previous five (5) years.

FINANCIAL INFORMATION (in EURO)	Actual				
Non Current Assets					
Current assets					
Total Assets					
Current liabilities					
Long Term liabilities					
Total Liabilities					
Owners Equity					
Turnover					
Operating costs					
Profits before taxes					
Profits after taxes					

The Tenderer shall specify his ability to secure the sources of financing to meet the cash flow demands of the project.

Note: please attach financial statements for the last three years.

Signed.....

Exhibit E1 - Price proposal

Name of Tenderer:.....

PRICE PROPOSAL in EURO (all prices must be VAT excluded)			
<i>Item</i>	<i>Model/producer</i>	<i>Cost</i>	<i>Responsible firm *</i>
3.5- Power generation and storage systems			
3.5.1-Land preparation and fencing 3.5.3-Foundations and supporting structures			
3.5.2-PV panels			
3.5.4-Control and Monitoring systems			
3.5.5-Switchboards 3.5.9-Grounding and protections And any other AC/DC equipment			
3.5.6-DC/AC Inverter			
3.5.7-Diesel generator			
3.5.8-Battery storage system			
3.5.12 Bi-directional inverters			
3.5.10-Components arrangement on site 3.5.11-Security measures And any other civil works			
Other costs, if any (to be specified)			
Sub-Total 1			
3.6-Distribution grid			
3.7-Metering system			
3.8-Building wiring			
3.9-Additional infrastructures			
3.10-Goods transportation			
Other costs, if any (to be specified)			
Total			

*to be specified in case of joint venture or consortium only

Signed.....

Exhibit E2 - Price declaration form

Dear Sir,

Having read through and examined the entire Request For Tender (RFT) Document, RFT no. N. AVSI/MOZ/AICS/011387/ITA/01-2020, the Requirement and all other Annexures to the RFT Document, we offer to provide EPC services for the procurement, design and construction as detailed in the Tender document at the following total amount:

Euro (in numbers)..... (Excluding VAT)

Euro (in words)..... (Excluding VAT)

We confirm that this price covers all activities associated with the project management and consulting service, as called for in the Tender document. We confirm that AVSI will incur no additional costs whatsoever over and above this amount in connection with the provision of this service.

We undertake to hold this offer open for acceptance for a period of 120 days from the date of submission of offers. We further undertake that upon final acceptance of our offer, we will commence with the provision of service when required to do so by the AVSI.

We understand that you are not bound to accept the lowest or any offer and that we must bear all costs, which we have incurred in connection with preparing and submitting this tender.

We hereby undertake for the period during which this tender remains open for acceptance not to divulge to any persons, other than the persons to which the tender is submitted, any information relating to the submission of this tender or the details therein except where such is necessary for the submission of this tender.

Signed.....

Date.....

Print name of signatory.....

Designation.....

For and on behalf of: company name:

Exhibit E3 - Payment Structure

Name of Tenderer:.....

PAYMENT STRUCTURE	
Percentage of the total Tender amount (%)	Advancement of the project
	Upfront (<i>advance payments will require a Performance Bond of the same amount</i>)
	Step 1 – to be specified
	Step 2 – to be specified, if any
	Step 3 – to be specified, if any
	Commissioning
	Provisional Acceptance Certificate (PAC)
	Final Acceptance Certificate (12 months after PAC)

Signed.....

Exhibit F - Execution timing

Name of Tenderer:.....

EXECUTION TIMING	
Phase	Date/Duration
Goods transportation (shipping date)	
Storage system transportation (if different) (shipping date)	
Estimated commencement date (date in which materials will be ready on site)	
Estimated completion of power generation plant (date)	
Estimated completion of storage system (if different) (date)	
Estimated completion of distribution grid (date)	
Estimated completion of last-mile connections and building wiring (date)	
Estimated commissioning (date)	
Project duration (months)	

Signed.....

Exhibit G - Experience in mini-grids

Name of Tenderer:.....

The Tenderer must provide the following information:

Details of the Tenderer's current and past (over the past ten years) mini-grind projects.

Applicant (Lead Applicant/ Partner 1/ Partner 2)	Client name	Project description	Project cost	Project period (start and end dates)	Description of service performed and extend of Tenderer's responsibilities	Name, title and telephone contact of client

Signed.....

Exhibit I - Eligibility Certificate

To:

anna.benetello@avsi.org

Procedure N. N. AVSI/MOZ/AICS/011387/ITA/01-2020

ELIGIBILITY CERTIFICATE

The undersigned legal representative of (*name of the organization and full details*)

_____ :

hereby certify that the above-mentioned organization (individual) and its representative/s

- is not bankrupt or being wound up, having its affairs administered by the courts, have entered into an arrangement with creditors, has not suspended business activities, is not the subject of proceedings concerning those matters, or is not in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- has not been convicted of an offence concerning its professional conduct by a judgment that has the force of *res judicata*;
- has not been guilty of grave professional misconduct proven by any means that the contracting authority can justify;
- has not failed to fulfill obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which it is established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- has not been the subject of a judgment that has the force of *res judicata* for fraud, corruption, involvement in a criminal organization or any other illegal activity detrimental to other countries' financial interests;
- has not been declared to be on serious breach of contract for failure to comply with their contractual obligations towards any contracts awarded in the normal course of business
- no AVSI staff has an interest in the company directly or indirectly, and that any relationship that may exist between the company and any AVSI staff has been disclosed.
- Is not currently subject to an administrative penalty referred to in Article 109(1) of the EU Financial Regulation (for programmes funded by the EU budget and the 11th EDF) and in Article 99 of the 10th EDF Financial Regulation (for programmes funded by the 10th EDF).
- abide to the standards established by UNICEF in relation to the protection of children's rights and adhere to the principles of non-exploitation of child labour and the respect of basic social rights and working conditions.
- will guarantee, in case of contract eventually awarded, to external and independent auditor, indicated in written by AVSI, appropriate right of access to its financial and accounting documents for the purposes of checks and audits, as the case may be.

Done in _____, on the _____

Name, Title and Signature: _____ (Stamp)

Exhibit J - Code of Ethics



People for development

CODE OF ETHICS

AVSI FOUNDATION



People for development

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INTRODUCTION

The Code of Ethics (from here on referred to as: “Code”) is an official AVSI Foundation document (from here on referred to “AVSI” or “Foundation”), approved by the Board of Directors, which contains principles and rules of conduct to be followed by anyone who works or deals with the Foundation, such as partners, donors, beneficiaries.

The purpose of the present code is to declare and disseminate the values and rules of conduct that the Foundation intends to maintain as a reference during its activities.

The present code is binding and must be met by all staff members: this includes anyone who conducts activities on behalf of the Foundation, anywhere, both within Italy and abroad, anyone who fulfils roles of representation, administration or management of the Foundation, as well as collaborators and external consultants operating in the interest of AVSI.

Control over the compliance with the present Code is exercised by a Supervisory Authority as per the “Model of Organization, Management and Control” pursuant to Decree n. 231 of June 8, 2001 (from here on “Model”). The Supervisory Authority may propose changes to the Board to stay up-to-date with new laws and with potential new activities.

The present Code was adopted by AVSI Foundation Board of Directors on 2013, April 30 with immediate effect.

The present Code is available on the Foundation website and is displayed on the wall of the Foundation's headquarters.

All AVSI network members are required to adopt the present code or equivalent document stating equivalent principles binding for all their staff members.



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GENERAL ETHICAL PRINCIPLES

AVSI Foundation was founded in 1972 as “Association of Volunteers for the International Service”.

It is a not-for-profit organization following the Social Teaching of the Catholic Church, its mission is the promotion of development cooperation activities – also abroad - volunteering and support to peoples in developing countries, transition economy countries and any country that experiences acute need or emergency situations. In some of these latter cases, it intervenes even on a humanitarian level.

It was recognized in 1973 by the Italian Ministry of Foreign Affairs as a non-governmental organization for international cooperation (NGO); is registered as a PVO with the United States Agency for International Development (USAID) and holds General Consultative status with the UN Economic and Social Council (ECOSOC) in New York.

In 2004, the Council of Founders officially transformed AVSI from an association into a foundation, thus calling it “AVSI Foundation” and approving its statute.

AVSI is involved in more than 100 cooperation projects in 37 countries worldwide in Africa, Latin America and the Caribbean, Eastern Europe, Middle East and Asia. AVSI's main activity areas are education and social development, urban upgrading, healthcare, labor, agriculture, food security and water, energy and environment, humanitarian emergency and migrants and refugees

The general ethical principles that inspire the work of AVSI Foundation and to which it aims to adhere, represent the founding values through which it intends to achieve its mission.

These general principles are the following:

- Honesty
- Loyalty
- Fair conduct
- Solidarity
- Non-discrimination
- Trasparency
- Responsibility



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ETHICAL PRINCIPLES OF CONDUCT

The ethical principles stated hereabove, which orient the work of the Foundation, are elaborated in further detail in the following ethical principles of conduct. These will guide AVSI Foundation staff members towards more professional, moral and fair management.

Legality

AVSI's inescapable principle is respect of law and regulations in force in all countries where it operates. Employees, collaborators, providers, partners, donors and anyone who deals with AVSI must commit themselves to this principle. AVSI will not establish or maintain any relation with anyone who does not abide by this principle.

AVSI clearly states that no-one can violate the law by arguing that he does so in the interest of AVSI, as what is against the law is against AVSI.

Equality and non discrimination

AVSI Foundation will not favor, either directly or indirectly, any form of discrimination based on gender, age, ethnicity, religion, political or union affiliation, language or health conditions.

Safeguard and protection of the person

The value of the person as such is a fundamental principle that guides AVSI's conduct. The Foundation's approach is based on listening and dialogue with the goal of improving solutions and services offered to users and stakeholders, as well as professionalism and skills of its own staff.

Throughout its work and projects, AVSI safeguards and promotes human rights within the range of its activities, by cooperating with and supporting other international organizations pursuing this goal. AVSI will not favor, either directly or indirectly, any abuse. On the contrary, it will report any abuse it comes to know of.

Dutifulness

AVSI Foundation will respect its employees and require them to always act with attention and accuracy in their work, through the best use of available resources and by avoiding undue burdens and waste of resources.

The Foundation will constantly provide training and development programs in order to increase professionalism of staff at different levels and improve their professional and management skills.



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Honesty

AVSI Foundation requires its employees, partners, collaborators not to pursue any personal or company's benefit, against the law in force and the rules contained in the Code of Ethics and in the Code of Conduct. They are likewise required, not to do any actions that go against what common sense deems correct.

Trasparency

The Foundation ensures and maintain as much transparency as possible in its activities: every operation and transaction is accurately recorded, authorized, verifiable, lawful, consistent and reasonable, according to the law in force and internal regulations. Bribery, corruption and complicity in such wrongdoing are prohibited. Anyone who has any relation with the Foundation must be provided with complete and accurate information on the activities they have to do with.

In particular, all accounting must be adequately reported so that it is possible to assess the actual financial performance of the Foundation and monitor a not-for-profit conduct, in compliance with the Foundation's Statute.

Equality and impartiality

AVSI Foundation will act with equality and impartiality and provide equal treatment to anyone it has to deal with, maintaining adequate distinction between the different roles of the subjects.

AVSI requires objectivity and fairness on the part of its employees and collaborators in their work and in the judgments that they express, regardless of any personal relationship (family or otherwise).

Protection of privacy and confidentiality

The Foundation ensures compliance with laws on privacy and confidentiality. Data protection and data security are also guaranteed at all times according to Decree n.196/2003.

All personal and sensitive data are processed in a lawful and fair way, thus preventing third parties from accessing them.

Foundation staff and collaborators are prohibited to use personal information for any purpose other than their specific employment activities.

Absence of conflict of interest

Through the course of their activities, employees and collaborators must avoid situations in which they may have or seem to have a conflict of interest.



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A conflict of interest occurs when a person to whom the present Code of Ethics applies, pursues an interest other than the Foundation's mission or engages in activities that may interfere with their ability to make decisions in the sole interest of the Foundation.

Just as an example, a conflict of interest occurs in the following situations:

- direct and indirect ownership of shareholding or financial interests in supplier, competitor and client companies;
- acceptance of positions of any kind at supplier, donor or partner companies.

In case of conflict of interest, the employee to whom the present Code of Ethics applies must immediately inform the person in charge.

Sustainable Development

AVSI Foundation respects the principle of sustainable development and fosters a fair social environment, particularly in the management of trade relations with Africa, South America and all the fields in which AVSI operates.

Furthermore, AVSI protects the environment as a primary asset and aims to ensure compatibility between projects and environmental necessities in the countries in which the project is implemented, by encouraging the use of environmentally friendly technologies.



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RULES OF CONDUCT FOR INTERNAL AND EXTERNAL RELATIONS

The rules of conduct, deriving from the general ethical principles and the ethical principles of conduct regulate the relations within and between:

- Donors
- Partners
- Suppliers
- Employees/collaborators/volunteers/internal bodies
- Beneficiaries
- Press and media
- Auditors
- Public Administration

Relations with Donors

Transparency and fairness are ensured through relations with donors, to this end:

- it is prohibited to give, offer or promise any money or other non-cash benefit;
- it is prohibited to exercise undue pressure;
- it is prohibited to submit untruthful statements with the purpose of receiving public funds or benefits;
- accounting procedures must clearly identify donations as well as their sources;
- it is prohibited to use money received as donation for any purpose other than the ones for which it was originally given;
- the funds must be used in such a way that operational costs are kept to a minimum and as many resources as possible are allocated to the beneficiaries;
- activities must ensure productive employment of facilities, economic resources and local staff with the purpose of reaching a concrete and lasting development in the country.

AVSI Foundation will reject any donation in materials, money, services from companies that manifestly violate human rights, the rights of workers or the environment, that produce or trade weapons, pornographic material or any other material that would degrade the human person and the environment.



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Relations with Partners

Partners (agencies or associations) are carefully chosen for common activities according to the following standards:

- the partner must not pursue profit goals through the common activities;
- the partnership must observe the principles contained in the Foundation's Code of Ethics;

Relations with Suppliers

When choosing its suppliers, AVSI Foundation:

- favors technical and economic subjects in the local countries where a decent quality of goods, labor and services is maintained;
- appoints a subject in accordance with tender procedures for goods, works and services, on the basis of objective evaluations and in full compliance with the standards of free competition, quality and low price.
- Demands respect for laws, ethical clauses and rules dictated by the Foundation.

Relations with Employees, Collaborators, Volunteers, Members of Internal Bodies

- AVSI's main asset is its human resources; the Foundation promotes their skills, aspirations and professionalism.
- Relations with employees, collaborators, volunteers and members of internal bodies must be conducted with maximum respect and must be based on a codified set of rights and duties. In particular:
 - ***Duties of AVSI Foundation***
 - offering everyone equal opportunities of professional development, with no discrimination based on gender, age, disability, religion, nationality, ethnicity or political and union affiliation;
 - observing the principles contained in the Universal Declaration of Human Rights and in the European Convention on Human Rights, in the Declaration of Rights of the Child and in the Convention to Eliminate All Forms of Discrimination Against Women;
 - complying with the international standards on working conditions and workers' rights, of which we can mention: freedom of expression, of association, the right to collective bargaining, abolition of forced labor, equality of opportunity and treatment and other standards set by the International Labor Organization (ILO).
- ensuring adequate and functional work environment;



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- avoiding any form of discrimination and abuse: all decisions related to human resources must be made according to merit and ability, without favoring any individual.
- rejecting any form of irregular work, forced labor or exploitation;
- pursuing constant improvement of everyone's skills, by favoring training and development opportunities and perfecting operational methods and strategies;
- acknowledging everyone's skills and contributions to the common goal;
- ensuring circulation of the Code of Ethics and procedures;
- ensuring privacy;
- ensuring compliance with laws and regulations concerning health protection and work safety;
- providing adequate information on life and safety conditions in the country where personnel are employed, as well as on sanitary prevention practices to be followed.

Duties of Employees

- observing the fundamental rights of the person, especially the rights of the child and avoiding any form of discrimination;
- behaving and dressing with decency, showing respect for local colleagues, partners, habits, cultures and religions within the dignity of one's role and in accordance with the principles of the Foundation;
- employing the Foundation's goods in a fair way;
- showing respect for work environment and premises;
- reporting any conflict of interest that may arise in the course of one's work.

Staff are prohibited to:

- participate in military operations and the like;
- own and carry weapons;
- participate in political activities without explicit consent from the Foundation;
- act in a way that damages the Foundation or its image;



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- employ underage workers;
- use psychotropic substances;
- act in a violent/abusive manner through threat, oppression, psychological harassment which offend dignity and psychophysical integrity of lower-level colleagues or which degrade the work environment;
- exercise any form of harassment;
- have sexual relations with underage people;
- effect payments and transactions in an unfairway and against the anti money-laundering laws;
- make and circulate false money, even if it was received in good faith;

Relations with Beneficiaries

Beneficiaries must be fully informed on the ethical principles that inspire the collaborators and partners, as well as on the activities, donors and resources used in the activities that affect them.

Relations with Press and Media

Outbound communications must be truthful, verifiable, not aggressive and respectful of rights and dignity of the person.

Relations with Auditors

Relations with auditors must be conducted rapidly, fairly and with transparency. Auditors must be provided full cooperation and obstructionism must be avoided. It is prohibited to conceal information, provide untruthful documents and obstructing the auditors in the performance of their duties.

Relations with the Public Administration and Judicial Officers

Relations with the Public Administration, including Supervisory Agencies, must be managed by those in charge of such relations and with transparency, fairness, completeness and traceability.

AVSI commits itself to:

- not receiving any funds or contributions from the Public Administration by means of false and untruthful declarations or by omitting due information;
- not using funds or contributions for any purpose other than the ones for which they were originally given;
- not pursuing any other benefit by defrauding the Public Administration.



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As far as relations with judicial officers are concerned, it is prohibited to exercise any form of pressure on the person called to testify with the purpose of preventing such testimony or making it untruthful.

It is prohibited to help a person who has carried out an act of legal significance to avoid the investigation of the authorities, or to escape their investigations.



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RULES ON THE APPLICATION AND VIOLATION OF THE CODE OF ETHICS

Adoption and circulation

The board of directors is the sole internal body that can adopt and modify the Code of Ethics.

The Code is made available to all the employees and circulated to all key stakeholders; it is also available on the Foundation's website www.avsi.org.

Field of application

The principles of this Code apply to everyone who works with AVSI Foundation: administrators, auditors, managers, employees, collaborators, partners, suppliers, donors and beneficiaries.

Supervision

The Supervisory Authority, established under Decree 231/01, is in charge of promoting and monitoring the compliance with the Code of Ethics.

In particular, the Supervisory Authority:

- promotes the implementation of the Code through ad hoc procedures;
- proposes changes to the Code;
- examines reported violations and submits the outcomes of such inquiries to the body in charge.

Violations

Compliance with the Code of Ethics is part of the contractual obligations of anyone who works with AVSI Foundation.

In case a violation of the Code of Ethics is confirmed, and in case they are employees, AVSI must prosecute those responsible for the violations, according to the contract in force; in case they are external subjects, it must resort to all necessary/appropriate measures in order to prevent such violation from ever happening again. Measures can include dismissal (resolution of contract according to Law 1453c.c.) or interruption of commercial/professional activities with a supplier/collaborator, with consequent mandatory compensation.

Suspected violations of the Code of Ethics must be reported in writing to the Supervisory Authority at the following address:

*Organismo di Vigilanza D.Lgs. 231
Fondazione AVSI
Via Legnone 4
20158 Milan*



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or by e-mail to: organismodivigilanza@avsi.org

AVSI Foundation monitors the compliance with the Code of Ethics, through adequate means of information, prevention and control and ensuring transparency of activities and conduct, and it implements correctional measures if deemed appropriate.

The Code of Ethics is integral part of the Model of Organization, Management and Control adopted by the Foundation as per Decree 231/2001.