

CALL FOR PROPOSALS

TITLE:	NIS LUUQ SOLAR ELECTRIFICATION PROJECT
LOCATION:	LUUQ, GEDO REGION, JUBALAND, SOMALIA
GRANTOR:	NORDIC INTERNATIONAL SUPPORT FOUNDATION – NIS FOUNDATION

The Nordic International Support Foundation (NIS) is seeking proposals from local and international firms to supply and install a PV-power-plant, generating 400 – 500 kWh daily. A relatively trouble free operation for 15- 20 years will be required. The plant is to be connected to an existing xxx kW diesel-powered mini-grid, thus creating a PV-diesel hybrid three-phase minigrid. Current consumption is thus that PV generated electricity can (nearly) all be consumed immediately, hence little or no storage thereof will be required. The project is based in Luuq, Somalia, located in Gedo Region, approximately 75kms east of Dollow town on the Ethiopia-Somalia border. The training of local technicians of the local power company in PV system maintenance will also form part of the programme. Please refer to the ToR below for detailed information.

Proposal format

Interested companies are required to provide the following details:

- Information about the firm's background and relevant expertise/experience in Somalia and the installation of PV-diesel hybrid system (max 2 pages);
- List of proposed key professional personnel, indicating expected level of effort (attach CVs);
- Understanding of the TOR (max 2 pages);
- Description of the approach, methodology and work plan for performing the different components of the assignment: sourcing, transport, installation and training of local technicians (max 3 pages for each component);
- Detailed activity based budget with comments;
- Three letters of recommendation citing specific project

Submission of proposals

Proposals must be submitted by 5.30pm CET on 27 February 2018. All proposals must be submitted electronically to procurement.somalia@nis-foundation.org, with the subject line "NIS Luuq Solar Electrification Project- CALL FOR PROPOSALS".

Please note, only short-listed applicants will be contacted.

Contact information

Please forward any query to the following e-mail address: procurement.somalia@nis-foundation.org.

TERMS OF REFERENCE
Supply installation and training
LUUQ SOLAR ELECTRIFICATION PROJECT

Project description

This project seeks to address two problems simultaneously: lack of access to energy services for poorer households and vulnerable groups, including IDPs and returnees; and the challenge of supporting the development of critical public-private sector cooperation to deliver basic services and contribute to stabilising the country. Access to energy in many cities in Somalia is mainly a problem due to the very high prices for electricity. Electricity providers around the country are dependent on expensive diesel generators: prices vary from US\$1/kWh in more developed markets like Mogadishu to US\$3/kilowatt hour (KWh) in smaller cities. Generally speaking, these high prices are a barrier to the market for many households and smaller businesses, as well as government offices and other public service providers, who cannot afford to pay.

This project seeks to build upon the current operations of the sole electricity provider in Luuq, Jubba Electric Company (JECO), introducing solar generation to its energy-mix in order to reduce diesel consumption, and therefore allowing for lower consumer prices. JECO has a bilateral agreement with local authorities, whereby the company is given the rights to use government land and assets to produce and distribute electricity, in return for providing free electricity to government offices, mosques and some other government facilities.

The project's overall objective is to contribute towards achieving universal energy access in Somalia by demonstrating the viability of the project's public-private sector partnership model for increasing accessibility to affordable renewable energy in Somalia. The project's model seeks to lower the cost per kWh in rural areas by retrofitting diesel-based isolated grids with renewable energy technologies. Increased accessibility to modern energy services will positively impact on beneficiaries' quality of life and stimulate economic opportunities in the target areas.

Project Budget

The maximum budget for this tender is US\$240,000.00. The total costs in each bid shall be inclusive of all taxes, duties, fees and other impositions paid by the firm in delivery of the goods and services specified in this tender document. Any offers which significantly exceed the stated maximum budget will be excluded from further assessment.

1 OBJECTIVES OF CONTRACTED SERVICES

The contract envisaged for this project consists of three parts: sourcing and transport (Mombasa Port) of solar mini-grid components, installation of the solar-power system and integration with existing diesel-powered network, and training for local partner technicians for maintaining the system.

SCOPE OF WORK AND GENERAL TECHNICAL SPECIFICATIONS

The general scope of work involves Design, Procurement, Supply, Installation and commissioning of the Mini-Grid photovoltaic power plant to produce approximately 400 - 500KWh per day. The grid will be connected to an existing diesel-powered grid (see details below). The system shall be designed for direct use during daylight hours and will not include battery storage capacity.

- Bidding companies are requested to provide full detailed technical solutions within the following parameters:
- All system equipment must have a functioning lifespan of at least 20 years for PV panels and 10 years for power electronics;
- All materials and equipment must be proven to perform in extreme environments relating to heat, humidity, wind and dust.
- Full technical specs are required for all equipment and should conform to all international standards:
 - IEC 61215 / IEC 61730:
 - VDE/CE/MCS/JET/KEMCO/SII/CEC AU/ INMETRO/CQ
 - UL 1703 / IEC 61215 performance: CEC listed (US) / FSEC (US Florida)
 - UL 1703: CSA | IEC 61701 ED2: VDE | IEC 62716:
 - TUV | IEC60068-2-68: SGS PV CYCLE (EU) |
 - UNI9177
- A detailed energy calculation (yield per hour plus variation over the year) should be provided for proposed configuration of photovoltaic modules.
- System design should be modular to the extent that it can be scaled to the available budget

Inverters and power electronics

All inverters must be adequately protected (against overvoltage, spikes, lightning strikes, etc., and harmonics with fault ride through technology. All inverters must conform to international standards and have relevant certificates and permits, including: AS 4777, CE, CEI 0-213, C10/11:2012, DIN EN 62109-1, EN 504381, G59/3, G83/2, IEC 61727/MEA², IEC 61727/PEA², IEC 62109-2, NEN EN 50438, NRS 097-2-1, PPC, PPDS, RD661/2007, RD 1699:2011, SI 4777, UTE C15-712-1, VDE0126-1-1, VDE AR-N 4105, VFR 2013, VFR 2014

Spare parts

As part of the system the contractor must include extra a minimum of spare parts, including solar modules (5), DC cables and cable connectors. We also invite bidders to quantify what they view as a required minimum of spare parts.

Installation

The contractor will be required to provide a sufficient number of technicians to the site for installation, supervision and commissioning of the system. The proposal should include the anticipated level of effort per technician during the installation phase.

Linking to existing grid

The existing deisel-powered grid with which the PV power-plant should be coupled consists of the following:

Generator 1	Generator 2	Generator 3	Generator 4
200 kVA	160 kVA	160 kVA	250 kVA
(Peak Hours) 9:00 am -2:30 pm AND /OR 4:00 pm -10:00	7:00 am -9:00 pm AND /OR 10:00 pm -12:00 Or During Peak Hours in synchronization with G3	10:00 pm -12:00 AND /OR 7:00 am -9:00 pm Or During Peak Hours in synchronization with G2	Faulted
Total Fuel Consumed: 400 L/Day The Distance b/w JECO Power Station (N03 47.535 E42 32.711) and Proposed Land (N03 48.749 E42 32.995) for Solar System installation: 2.5 kM			

The current grid operates on a three-phase system servicing around 950 households and businesses around Luuq town, all within a 2km radius. See technical specs for generators below:

Generator 1



Fig1: Name Plate for 200 kVA Diesel Generator 1, JECO Power Station

Generator 2



Fig2: 160 kVA Diesel Generator,

Generator 3

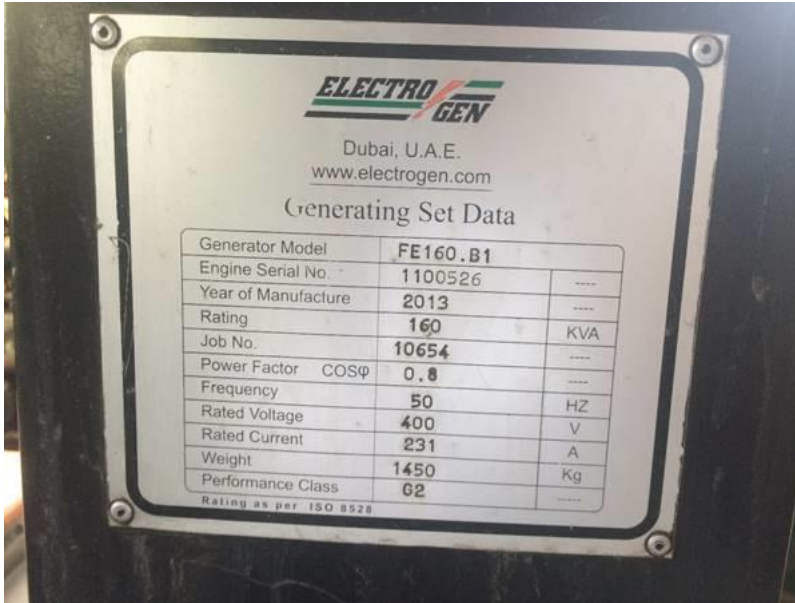


Fig3: Name Plate for 160 kVA Diesel Generator, JECO Power Station

Generator 4



Fig4: Name Plate for 250 kVA Diesel Generator (faulted), JECO Power Station

Warranty

The proposed system must carry a guarantee against design and workmanship for a at least two years; all solar modules must carry a minimum performance warranty of at least 80% yield after 25 years, plus a produce warranty of at least 15 years; all inverters and power electronics must carry a minimum 5 year warranty.

Follow up and servicing of installation

This tender must include provisions for servicing and follow-up for a period of not less than one-year from the PV plant’s commissioning, including the deployment of technicians and replacement of any faulty components at the contractor’s own cost.

Training module

The contractor will be required to provide a adequate training programme for technicians from the local electricity provider. The programme should include the provision of basic training equipment and focus on issues relating to system maintenance, troubleshooting and fixing.

Project timeline

Please provide a tentative timeline for the contract from procurement to completion of training activities

											Year 4			
												Q4	Q1	Q2

Deliverables

The required outputs of this assignment will be as follows:

1. Solar system procurement, installation and commissioning
2. Training programme for local technicians

Estimated level of effort

The Contractor should provide the breakdown of the level of effort and unit cost for all HQ and field staff when submitting the proposal.

Supervision

The Contractor will work under the overall guidance of NIS Country Representative and XXXX, and in close collaboration and dialogue with relevant stakeholders in all programme areas.

2 AWARD CRITERIA

A tender will be selected following an assessment of the following award criteria.

2.1.1 Proposed solution for the service required (weight 50%)

Tenderers must submit a description of the proposed solution in accordance with Scope of Work and General Technical Specification section, including an assessment of risk factors and a progress plan.

Assessment will be based on the tenderers':

- Understanding of the project's objectives;
- Description on how the tenderer will address particular challenges regarding implementation, delivering immediate results and achieving objectives.
- Proposed design of the required PV-power-plant system
- Proposed work plan demonstrating optimal allocation of programme team resources for results, and different tasks and time periods given the project team's qualifications.
- The proposed technical solution must include a tentative budget for the implementation. The subject of the assessment is the realism of the budget and value for money plan.

2.1.2 COMPETENCE AND CAPACITY TO DESIGN, IMPLEMENT AND MANAGE THE PROGRAMME (weight 40%)

Tenderers must describe competences and capacities of the core project team that they propose to use on this contract. The following competencies are considered particularly relevant:

- o Projects of similar type and size in Somalia.
- o Projects in newly recovered areas in Somalia.
- o Projects in other fragile state contexts.
- o Understanding of and engagement with the private sector, private investment.
- o Management of similar sized programmes.

2.1.3 Price (weight 10%)

All prices must be for the duration of the contract period and be prices in USD. Tenderers must offer a price breakdown per component of the contract, e.g. procurement, transport, installation and training.