



energy

Department:
Energy
REPUBLIC OF SOUTH AFRICA

TERMS OF REFERENCE TO APPOINT NON-GRID CONSULTANT TO CONDUCT TECHNICAL INSPECTION ON SOLAR HOME SYSTEM INSTALLED IN LIMPOPO, WESTERN CAPE, EASTERN CAPE AND KWAZULU NATAL

1. BACKGROUND

- 1.1 The Department of Energy (DoE) through the Non-Grid Electrification Planning unit which is within the Integrated National Electrification Planning (INEP) hereby issues the terms of reference to guide the monitoring and evaluation of solar home systems' installations and maintenance under INEP's non-grid program. The Department is thus seeking the services of a consultant (individual or firm) to undertake the monitoring and evaluation of the installation for the solar home systems for the financial year 2016/17.
- 1.2 INEP installed over 25 000 solar home systems (SHS) in the 2015/16 financial year and intend to install 15 000 SHS in the current 2016/17 financial year. Whilst limited technical audits are undertaken by an internal team, a more thorough monitoring and evaluation is required to ensure the installation targets without compromising on quality.
- 1.3 There are established technical specifications for equipment and installation quality. All SHS systems supplied and/or installed in the Non Grid Electrification project areas must meet these requirements. The technical specifications are designed to ensure that the SHS meet applicable standards for reliability, longevity and safety. In addition, the Non Grid Service Provider (NGSP) is required to comply with other requirements of the project such as the provision of user's manual, user training, component warranties, and a one year maintenance period.
- 1.4 The SHS is supplied and installed by the NGSP in the identified project villages and the system type provided is a 95Wp which is provided under DoE grant financing.

1.5 The following areas are earmarked in terms of SHS audits

	PROVINCE	Numbers to be installed
1	LIMPOPO	400
2	KZN	400
3	WESTERN CAPE	300
4	EASTERN CAPE	500

2. OBJECTIVES

2.1 The objective of this assignment is to monitor and evaluate the SHS installations for 2016/17 financial year to ensure they are completed before 31st March 2017 and are installed according to specification. The submission of verification reports in English shall be submitted at the time that will be set by DoE.

2.2 The contractor is required to inspect and verify on a representative sample of private systems. The inspections will include field inspection of installation progress and systems installations to ensure that the systems are installed according to installation standards and good practice, and are fully functional, and that users have been instructed in the use and care of the systems.

3. SCOPE OF WORK

3.1 The scope of work for the consultant is outlined below:

3.1.1 Monitoring of Installations

- a) Ensure that the SHS installation contractor keeps to the schedule of installations and where this is not happening the matter is escalated to the DoE personnel for intervention.

3.1.2 Verification and inspection of SHS installations

- a) Verify the number and location of installations as submitted by the SHS installation contractor.
- b) Inspections and sign off SHS for correct installation. Where there are defects, issue correction instructions and sign off once completed. .
ISign off includes verifying that users have received training on use and basic maintenance of the SHS, including whom to contact in case of problems
- c) Conduct user interviews (sample) to gather information on system performance and use, concurrent use of other energy products, if any

(e.g., dry cell batteries, candles, other PV systems) and test user satisfaction.

3.1.3 Other reporting and liaison

- a) Attendance of meetings with the Department as required during the contract
- b) Final report

3.2 Reports and outputs

3.2.1 Inception meeting and report

- a) During the inception meeting the following will be clarified and documented:
 - I. Monitoring plan
 - II. Verification process,
 - III. Requirements for inspections,
 - IV. Confirm geographical location of installations,
 - V. Sampling plan,
 - VI. Schedules for inspections,
 - VII. Spread sheet-based MIS requirements,
 - VIII. Clarify issues such as obtaining Department or local government approvals for site visits, etc.

3.2.2 Monthly Verifications of installations

- a) Verification visits shall be conducted monthly or otherwise as requested by the Department depending on progress made. Department shall provide identification data of the specific systems to be visited and verified.
- b) When requested, the Consultant shall complete the verifications and submit the verification report with the completed verification forms and results of the commissioning tests and end user surveys to the Department. These verifications shall cover 100% of SHS per village as identified by Department.
- a) In instances where systems have been found to require remedial measures (correction of minor or major snags) to bring them into compliance, the reports will include the details of these measures. These findings may be shared with the NGSP, who may be requested implement the measures without delay.

3.2.3 Follow-up Verifications

- a) The Consultant may be required to conduct follow-up verifications in case problems are detected during the initial and semi-annual verifications and remedial measures have been identified. Also to confirm whether the remedial measures have been implemented satisfactorily.

3.3 Physical Verifications

This section describes in further detail the physical verifications activities.

3.3.1 Verification inspections on site

- a) Department shall provide a “Verification List” at the initial stage, in softcopy format on an EXCEL-based format and, if available, in format of MIS if available. The Consultant shall verify the information in a procedure acceptable to Department.
- b) The Consultant staff will visit the addresses provided by the Department in the Verification List to gather information on the SHS installed at those addresses.
- c) The Consultant shall physically inspect the system type, major and minor components for completeness, and capture the information to the spreadsheet
- d) The Consultant shall physically inspect the quality of installation and capture the information to spreadsheet
- e) Verification Data captured shall be submitted to Department in agreed spreadsheet format for checking before approval.
- f) During the visit, the Consultant shall also interview the end users of the installed SHS regarding the performance and expectations of the SHS and other details, and note any useful comments. This data shall be captured and submitted to Department in agreed spreadsheet format.

3.3.2 The information to be independently verified and captured includes, but is not limited to, the following:

- a) Name of the supplying company
- b) Name and address of the customer, and ID number;
- c) Address of the customer, including township, district and village
- d) GPS co-ordinates to be verified and or updated by the Consultant
- e) A photograph of the customer/representative along with the SHS
- f) Date of installation as per verification list, compared with the Practical Completion date of public systems, or “Installation and Handover Receipt” of the private systems
- g) System number and name (i.e. 3.SHS-L, 4.E-Basic, 11.H-RHC)
- h) Module type, rating, quantity, serial numbers, barcode serial numbers
- i) Battery type and Ah capacity and voltage, quantity, barcode numbers
- j) Charge controller type, capacity, barcode serial number
- k) Inverter type, capacity(VA), voltage, barcode serial number
- l) Number of lamps
- m) Lamp type and capacity, voltage
- n) Inspection of quality of installation shall include at least, Array location, orientation, tilt and shading
- o) Quality of cabling and joins
- p) Battery enclosure and fuse
- q) Signs and safety
- r) Lightning protection installed or not;
- s) AC distribution board and slave relays if installed.
- t) Identification of minor and major snags
- u) Availability of warranty card and user’s guide;
- v) Confirmation that the end user was instructed in operating the SHS as well as maintenance routines;

- w) Confirmation of customer payment of deposit
- x) Information on the use of the system (hours per day, uses), performance (e.g., failures, shutdowns)
- y) Customer satisfaction

3.3.3 The end user/representative should sign the data sheet to confirm that the visit has been made.

3.3.4 The Consultant will use the spreadsheet based Monitoring Information System (MIS) acceptable to Department, and submit the spread sheet in softcopy and, direct transmission to the data centre. This shall include PV Verification Forms, end user questionnaires procedures.

4. Deliverables and Schedule

4.1 The Consultant shall be responsible for all aspects of quality, performance, timing and reporting of the verification program where bided.

4.2 The Consultant will submit the following reports:

- a) Inception report, with acceptable PV Verification Forms, Performance Review forms, Commissioning procedures and Monitoring Information System: within 4 weeks
- b) Monthly Verification Reports
- c) Follow-up Reports – as may be requested by the Department
- d) Final Report.

5. Contract Period

5.1 The verification services are expected to be undertaken over the period of three months from the signing of the contract.

6. Proposal and Budget

6.1 Bidders for the Consultant contracts must prepare individual bids comprising a proposal and budget to correspond with each project. Bidders may bid for all projects. However, bidders bidding for more than one project shall demonstrate capacity to undertake the total number of inspections over the 3 month installation period

6.2 The Consultant should prepare a technical proposal detailing the methodology of the PV verification work, quality assurance, proposed roll-out, equipment used, time line and detailed staffing schedule. The proposal must take the requirements of the NGSP into account (information about the NGSP requirements can be obtained from either Department).

6.3 The proposal must show how the quality assurance (QA) of the Verification team will be upheld. A team meeting the requirements under Consultant Qualifications must be presented. The tasks allocations per staff as well as a staff work schedule are required.

6.4 An overall budget must be presented for the project from Inception to Final Report.

Separate costs shall be presented for:

- Inception Report
- Monthly Verifications
- Follow-up Verifications at a total of 5% of all sites inspected
- Final Report

7. REPORTING AND LOCATION

7.1 The reports on each activity area and overall assignment will be directed to attention of Mr Serame Moeketsi the Manager for the Non-Grid Electrification Planning.

7.2 The operational base for the contract is South Africa, with the direct engagements with the stakeholders taking place in Pretoria. The consultant is expected to operate from the offices of the Department of Energy

8 TAX CLEARANCE CERTIFICATE

8.1 The bidder is required to submit an original and valid Tax Clearance Certificate issued by the South African Revenue Services together with the bid documents before the closing date and time of the bid. **Failure to comply with this condition will invalidate the bid.**

9 SECURITY BACKGROUND CHECK

9.1 The Department reserves the right to conduct Security background checks in respect of the selected bidders, their Directors and staff. Appointment of the successful bidder will be done subject to positive background checks.

10 EVALUATION CRITERIA

10.1 Broad-Based Black Economic Empowerment (B-BBEE)

10.1.1 Provisions of the Preferential Procurement Policy Framework Act (PPPFA) 2011 and its regulation will apply in terms of awarding points.

10.1.2 Bidders are required to submit original and valid B-BBEE status level Verification to substantiate their B-BBEE rating claims.

10.1.3 Bidders who do not submit their B-BBEE status level verification certificates or are non-compliant contributors to B-BBEE will not qualify for preference points for B-BBEE.

The table below depicts the B-BBEE status level of contribution:

B-BBEE Status Level of Contributor	Number of points(80/20 system)
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

10.2 Relevant Consultant Experience

10.2.1 The consultant previous experience in technical areas comparable to the project, the scale of past projects and the role undertaken within those projects highlighted and proof of three (3) referees must be attached.

10.3 Qualification

8.3.1 The consultant must have a university degree on Electrical Engineering and/or Renewable Energy studies

8.3.2 Copy of certified certificates must be attached to the proposal and failure to attach bidders will forfeit functionality points.

10.4 Understanding the project objectives

10.4.1 A consultant response should make a distinct linkage between the request and proposed solutions, not simply repeat the Terms of Reference.

10.5 Methodology

10.5.1 Consultant must outline the process for delivery of the proposed services. Inclusion of diagrammatic representation of the proposed processes, reporting relationships, systems, procedures etc.

10.6 Adding Value Services

10.6.1 Consultant can introduce innovative approaches to solving issues and should define the value for money benefits that would exceed those described in Terms of Reference, including how these are to be achieved and their relevance to the project

11 EVALUATION CRITERIA

11.1 Bids will be evaluated on 80/20 preference point system as outlined in the PPPFA of 2011.

11.2 The proposals will be evaluated in two phases:

Phase 1: Bidders will be evaluated based on functionality. The minimum threshold for functionality is **70 out of 100 points**. Bidders who fail to meet minimum threshold will be disqualified and will not be evaluated further for price and preference points.

No.	Criteria	Weights
1	<p>Consultant Experience:</p> <ul style="list-style-type: none"> • At least five (5) years' experience working in rural areas relating to SHS provide proof accompanied by correspondence from referees • At least three (3) years of experience in installation and/or inspection of solar systems in countries with similar conditions as South Africa. • At least three (3) years experience in providing technical assistance / capacity building and consulting in policy and planning in the energy sector (for example access, supplies, efficiency and reforms, and capacity building on policy and regulatory framework, renewable energy) 	<p>25</p> <p>10</p> <p>10</p> <p>5</p>
2	<p>Consultant qualification and skills:</p> <ul style="list-style-type: none"> • University degree (Electrical/Renewable Energy Solar PV qualification, Rural development degree, project management degree) • Proof of CV and Certificates must be attached. 	<p>15</p> <p>10</p> <p>5</p>

3	<p>Proposal: A detailed business proposal on main tasks indicated on 3 -6 above</p> <ul style="list-style-type: none"> • Understanding the project • Methodology • Value Adding • Project Plan 	60
		15
		20
		15
		10
	Total	100

For purposes of evaluating functionality, the following values will be applicable:

1=	Very Poor	Will not be able to fulfil the requirements
2=	Poor	Will partially fulfil the requirements
3=	Average	Will be able to fulfil the requirements
4=	Good	Will be able to fulfil better in terms of the requirements adequately
5=	Excellent	Will fulfil the requirements exceptionally

Phase 2:

Price	80
B-BBEE compliance	20

12 FORMAT AND SUBMISSION OF THE PROPOSAL

- 12.1 All the official forms (SBD) that are included in the bid document must be completed in all respects by bidders. Failure to comply will invalidate a bid.
- 12.2 Bidders are requested to submit two (2) copies: 1 original plus copy of the proposal and bid documents.

13 CLOSING DATE

13.1 Proposals must be submitted by 27 January 2017 at 10H00 at 192
Visagie street, Pretoria, in the bid box marked Department of Energy

12. ENQUIRIES

12.1 All general enquiries relating to bid documents should be directed to:

Rachel Moerane

Tel No: (012) 406 7742/406 7748

E-mail: rachel.moerane@energy.gov.za

12.2 Technical enquiries can be directed to:

Serame Moeketsi

Tel No: (012) 406 7683

E-mail: serame.moeketsi@energy.gov.za