

Terms of reference (ToRs) for the procurement of services below the EU threshold

CONDUCTING ENERGY AUDITS IN THREE (3) MILITARY BASES IN THE NORTHERN PART OF LIMPOPO PROVINCE.	Project number/ cost centre: 20.2108.7-003.00
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0.	List of abbreviations	2
1.	Context.....	3
2.	Tasks to be performed by the contractor	4
3.	Concept.....	5
	Technical-methodological concept	6
	Project management of the contractor (1.6)	6
	Further requirements (1.7).....	6
4.	Personnel concept.....	7
	Team leader	7
	Key expert 1	8
	Short-term expert pool with minimum , maximum members.....	8
5.	Costing requirements	10
	Assignment of personnel and travel expenses	10
	Sustainability aspects for travel	10
	2 <i>Alternative for contracts for works:</i>	Error! Bookmark not defined.
	Workshops and training.....	Error! Bookmark not defined.
6.	Inputs of GIZ or other actors.....	12
7.	Requirements on the format of the tender	12
8.	Option	Error! Bookmark not defined.
	Type and scope.....	Error! Bookmark not defined.
	Requirements.....	Error! Bookmark not defined.
	Quantitative requirements for the optional services	Error! Bookmark not defined.
	<i>Alternatives for contracts for works:</i>	Error! Bookmark not defined.
	Requirements on the format of the tender for the option	Error! Bookmark not defined.
9.	Outsourced processing of personal data	Error! Bookmark not defined.
10.	Annexes	13

0. List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
DoD	Department of Defence
EE	Energy Efficiency
EPC	Energy Performance Certificate
FK	Expert
FKT	Expert days
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GHG	Greenhouse Gas Emissions
IPMVP	International Performance Measurement & Verification Protocol
KZFK	Short-term expert
M&V	Measurement and Verification
ToRs	Terms of reference
RE	Renewable Energy
SANEDI	South African National Energy Development Institute
SECO	Swiss State Secretariat for Economic Affairs

1. Context

South Africa is facing significant electricity supply shortages. A key mitigation measure to alleviate the energy crisis and mitigate the rising cost of energy is effective energy management and the installation of energy efficiency (EE) technologies to reduce both total energy use and peak demand. Reducing consumption through EE improvements can cost less than generating, transmitting, and distributing energy from power plants, and can provide multiple socio-economic and environmental benefits, including a reduction in air pollution and greenhouse gas (GHG) emissions, improved energy security and jobs creation.

Recent initiatives to manage the ongoing energy crisis and coordinate a just transition will support South Africa to accelerate its transition to a low emission, climate resilient economy. Since 2011, the South African-German Energy Programme (SAGEN) collaborates with South African partners from government and the private sector to promote a diverse and inclusive energy transition for all. The main factors driving the energy transition include the economic and political drive towards low-cost clean energy solutions, the acceleration of decentralised power generation technologies, increased digitalisation, and energy efficiency reaching across entire power systems. These changes are causing a structural shift in the way power systems and markets are set up and operated. The 4th iteration of SAGEN (SAGEN-4) focuses its support on 4 key areas:

- Power sector reform (SAGEN Output 1)
- Power systems planning and operation (SAGEN Output 2)
- Embedded generation in distribution networks (SAGEN Output 3)
- Energy efficiency and municipal energy management (SAGEN Output 4)

The programme's energy efficiency activities are closely coordinated and implemented with the Department of Mineral Resources and Energy (DMRE), the South African National Energy National Institute (SANEDI), Department of Defence (DoD), and the South African Local Government Association (SALGA), and engaged municipalities.

Public sector infrastructure accounts for 2-3% of total final energy consumption in South Africa. The South African Government recognises the importance of leading by example by demonstrating a commitment to improving EE across all public sector buildings and infrastructure. Within this context the DoD seeks to identify and implement energy efficient measures and technologies to reduce energy usage in three (3) of their military bases situated in the northern part of Limpopo. DoD intends to conduct a detailed energy audit of the three military bases with the support of the SANEDI and the SAGEN programme implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, with co-funding from the Swiss State Secretariat for Economic Affairs (SECO).

The goal is for the DoD to have accurate and reliable data that will be used to develop comprehensive and bankable business cases for the implementation of EE and Renewable Energy (RE) interventions. Potential service providers with expertise and experience in conducting energy audits and developing energy consumption baselines for buildings and public/perimeter lighting are invited to submit proposal for the audits of the three (3) bases. The objective is to appoint a specialised service provider to conduct a detailed energy audits, develop an energy baselines, and recommend energy and efficiency and demand side interventions that could be implemented by DoD. See Annexure A which contains high-level information regarding bases to be audited.

2. Tasks to be performed by the contractor

The appointed consultant is to conduct a detailed energy audit of the three (3) military bases and develop an energy baseline report, with recommendations for improved energy efficiency and demand side management. This should be realized through the following activities.

a) Inception and collection of data and information on the three (3) military bases

- i. Inception meeting and submission of an inception report detailing the methodologies that will be used to respond to the main and specific objectives of the assignment.
- ii. Walk-through energy audits and collection of additional data through metering and measurements on site in accordance with relevant protocols and standards.
- iii. Data types to be collected should amongst others include – monthly energy usage, maximum energy demand, facility sizes, location, occupancy, equipment type, specifications, frequency of use, etc.
- iv. Identification of buildings that will require energy performance certificates (EPCs) in accordance with the regulations for mandatory submission and display of EPCs.
- v. Collation of collected data utilising energy audit templates agreed upon with project partners.

b) Analysis of collated data and benchmarking with relevant standards

- i. Analysis the building and infrastructure envelope, services, and controls.
- ii. Breakdown of energy usage and identification of significant energy users by equipment/process.
- iii. Provide an overview of supply and metering strategy and review of the energy management procedures, including maintenance.
- iv. Collation of data required for EPCs and benchmarking building energy performance against relevant standards such as the SANS1544:2014.
- v. Identify energy and cost saving opportunities together with pay back periods of the capital investment required to implement the energy saving measures.
- vi. Prioritize low-cost opportunities and large capital investment opportunities that could be pursued by DoD.

c) Develop an energy consumption baseline and submit a detailed energy audit report with recommended energy efficiency and demand side interventions

- i. Develop an energy consumption baseline and submit the collated data for each base on templates agreed upon with project partners.
- ii. Draft and present a detailed energy audit report in line with the minimum content of the Energy Audit Report attached as Annexure B for the three (3) military bases. The energy audit report should be endorsed by the team's measurement and verification specialist and incorporate all stakeholder's inputs.
- iii. Submission of the final energy audit report for the three (3) military bases with recommended energy efficiency and demand side interventions, and a high-level business case for the proposed interventions (potential energy savings, required capital investments, pay-back periods, internal rate of return etc.)

- The contractor is responsible for selecting, preparing, training and steering the international and national, short and long-term experts assigned to perform the advisory tasks.
- The contractor provides equipment and supplies (consumables) and assumes the associated operating and administrative costs.
- The contractor manages costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ.

The contractor reports regularly to GIZ in accordance with the current AVB of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Milestones/partial works	Deadline/place/person responsible	Criteria for acceptance
Develop and present a methodology that will be used to respond to the key objectives of the project. The methodology will be presented to project partners in the kick-off meeting and should have clear milestones to be followed in the execution of the project.	01 May 2024	Methodology endorsed by SAGEN and project partners
Develop and submit an inception report that confirms the methodology incorporating key decisions coming out of the kick-off meeting.	15 May 2024	Inception report endorsed by SAGEN team
Undertake walkthrough energy audits of three (3) military bases and collect additional data through metering and measurements on site.	15 June 2024	Schedule for the walkthrough audits arranged and agreed upon with partners.
Analysis of collated data and identification of energy efficiency and demand side management interventions. The raw data should be collated and submitted on templates agreed upon with project partners.	15 August 2024	Collated and analysed data submitted on agreed upon templates.
Prepare and submit a draft energy audit report outlining the energy consumption baseline of the three military bases, with a high-level business case of the identified energy efficiency and demand side management interventions.	30 September 2024	Draft report energy audit report
Prepare and submit a final energy audit report incorporating inputs from all project partners.	15 October 2024	Final energy audit report incorporating inputs from project partners.

Period of assignment: from 01 May 2024 until 31 October 2024.

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further

method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1 Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 2 (Tasks to be performed) (1.4.2).

Project management of the contractor (1.6)

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 2 (Tasks to be performed by the contractor) must be explained in detail.

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert months) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

Further requirements (1.7)

The tenderer is required to adhere to the International Performance Measurement & Verification Protocol (IPMVP) and/or relevant standards on conducting energy audits and verifying energy consumption baselines.

Additional conditions to consider when implementing this project include:

- All contractor labour involved in the project is exclusive to South African Citizens and/or Permanent Residents.
- Military Security (MS) compliance must be ensured for all civilian persons involved in the project/s.
- Requirement for the winning bidder working on site to be security cleared by Defence Intelligence, this will require submission of identity documents of all staff for vetting.
- Contractors must use identifiable uniform when on military installations.
- The DOD, SANEDI and GIZ are indemnified at all times against contractor loss or injury of any kind.
- No accommodation or resources will be provided on/by any military unit.

4. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

Team leader

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project.
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting the assigned team.
- Input into the design of project methodology and data collection instruments.
- Support data collection and analysis process in accordance with the relevant energy audit protocols and standards.
- Verification of the energy consumption baselines in accordance with the IPMVP.
- Compilation of the final energy audit report for the three (3) military bases with recommended energy efficiency and demand side interventions, and a high-level business case for the proposed interventions.
- Support the overall responsibility for the delivery of all outputs associated with the contract.

Qualifications of the team leader

- Education/training (2.1.1): university degree (Master) in Engineering, Energy Studies or Sustainability studies or Environmental Sciences
- Language (2.1.2): C1-level language proficiency in English
- General professional experience (2.1.3): 10 years of professional experience in the energy sector
- Specific professional experience (2.1.4): 5 years in conducting energy audits and developing energy efficiency projects.
- Leadership/management experience (2.1.5): 5 years of management/leadership experience as project team leader or manager in a company
- Regional experience (2.1.6): 5 years of experience in projects in South Africa
- Development cooperation (DC) experience (2.1.7): N/A
- Other (2.1.8): N/A

Key expert 1

Tasks of key expert 1

- Coordinate walk through energy audits and collection of data through measurements and metering on site
- Coordinate the analysis of collated data in accordance with the IPMVP
- Determination of the energy consumption baseline for each base
- Coordinate the identification of energy saving opportunities in the three (3) bases
- Compilation of the final energy audit report for the three (3) military bases with recommended energy efficiency and demand side interventions, and a high-level business case outlining financial and economic aspects of the proposed interventions.

Qualifications of key expert 1

- Education/training (2.2.1): University degree (Honours) in Engineering, Energy Studies, Sustainability or Environmental Sciences.
- Language (2.2.2): C1 -level language proficiency English
- General professional experience (2.2.3): 5 years in the energy sector
- Specific professional experience (2.2.4): 3 years in energy efficiency and conducting energy audits
- Leadership/management experience (2.2.5): N/A
- Regional experience (2.2.6): N/A
- Development Cooperation (DC) experience (2.2.7): N/A
- Other (2.2.8): N/A

Short-term expert pool 1 with minimum 3, maximum 5 members

For the technical assessment, an average of the qualifications of all specified members of the expert pool is calculated. Please send a CV for each pool member (see below Chapter 7 Requirements on the format of the bid) for the assessment.

Tasks of the short-term expert pool

- Analysis of collated data for the three (3) bases in accordance with the IPMVP.
- Determination of an energy consumption baseline for each base
- Identification of energy saving opportunities in the three (3) bases.

Qualifications of the short-term expert pool

- Education/training (2.6.1): 2 experts with university qualification (Diploma) in Electrical Engineering, 1 expert with university qualification in Environmental Sciences (Diploma)
- Language (2.6.2): 3 experts with C1-level language proficiency in English
- General professional experience (2.6.3): 2 experts with 3 years of professional experience in the energy sector, 1 experts with 1 years of professional experience in the engineering sector

- Specific professional experience (2.6.4): 2 experts with 2 years of professional experience in analysing energy data, 1 expert with 1 years of professional experience in conducting energy efficiency projects.
- Regional experience (2.6.5): N/A
- Development cooperation (DC) experience (2.6.6): N/A
- Other (2.6.7): N/A

The tenderer must provide a clear overview of all proposed short-term experts and their individual qualifications.

Short-term expert pool 2 with minimum 3, maximum 5 members

For the technical assessment, an average of the qualifications of all specified members of the expert pool is calculated. Please send a CV for each pool member (see below Chapter 7 Requirements on the format of the bid) for the assessment.

Tasks of the short-term expert pool

- Walk through energy audits and collection of data through measurements and metering on site.
- Analysis the building and infrastructure envelope, services, and controls.

Qualifications of the short-term expert pool

- Education/training (2.6.1): 2 experts with university qualification (Diploma) in Electrical Engineering, 1 expert with university qualification in Environmental Sciences (Diploma)
- Language (2.6.2): 3 experts with C1-level language proficiency in English
- General professional experience (2.6.3): 2 experts with 3 years of professional experience in the energy sector, 1 expert with 1 years of professional experience in the engineering sector
- Specific professional experience (2.6.4): 2 experts with 2 years of professional experience in conducting energy audits, 1 expert with 1 years of professional experience in implementing energy efficiency projects.
- Regional experience (2.6.5): N/A
- Development cooperation (DC) experience (2.6.6): N/A
- Other (2.6.7): N/A

The tenderer must provide a clear overview of all proposed short-term experts and their individual qualifications.

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills

- Socio-cultural skills
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

5. Costing requirements

Assignment of personnel and travel expenses

Per-diem and overnight accommodation allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable at <https://www.bundesfinanzministerium.de>).

Accommodation costs which exceed this up to a reasonable amount and the cost of flights and other main forms of transport can be reimbursed against evidence

All business travel must be agreed in advance by the officer responsible for the project.

Sustainability aspects for travel

GIZ would like to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

If they cannot be avoided, CO₂ emissions caused by air travel should be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

Fee days	Number of experts	Number of days per expert	Total	Comments
Designation of Team Leader	1	25	25	Overall responsibility for the advisory packages of the contractor
Designation of key expert	1	25	25	Coordinate and oversee the walk-through energy audits, collection, and analysis of data
Designation of short-term expert pool 1	3	20	60	Analysis of data

Designation of short-term expert pool 2	5	20	100	Walkthrough energy audit and data collection
Travel expenses	Quantity	Price	Total	Comments
Per-diem allowance in country of assignment	120			Per diem allowance for 6 experts, at 20 days per expert.
Overnight allowance in country of assignment	120			Accommodation allowance for 6 experts, at 20 nights per expert.
Transport	Quantity	Price	Total	Comments
International flights				Not applicable.
Domestic flights	6			Return flights (economy class) within the country of assignment during service delivery.
CO₂ compensation for air travel Guidance for GIZ service providers on avoiding, reducing and offsetting GHG emissions	6			A budget is earmarked for settling carbon offsets against evidence.
Travel expenses (train, car) <ul style="list-style-type: none"> • Car travel (mileage) • Car hire • Airport transfer, Gautrain, E-hailing (e.g. UBER) 				Travel within the country of assignment, transfer to/from airport etc.
Other travel expenses <ul style="list-style-type: none"> • Toll fees • Parking 				Travel within the country of assignment.
Other costs	Number	Price	Total	Comments
Flexible remuneration				A budget of R 40,000.00 is foreseen for flexible remuneration. Please incorporate this budget into the price schedule. Use of the flexible remuneration item requires prior written approval from GIZ.

Accommodation costs that exceed this up to a reasonable amount and the cost of flights and other main forms of transport can be reimbursed against evidence.

All business travel must be agreed upon in advance by the officer responsible for the project.

Flexible remuneration item

A budget of R 40,000.00 is foreseen for flexible remuneration. Please incorporate this budget into the price schedule. Note that the use of flexible remuneration is subject to approval by the GIZ and can only be used in support of activities outlined in these terms of reference (ToR).

6. Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

- The Department of Defence will conduct security vetting and clearance of the successful bidder and the assigned team before the inception of the project.

7. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English

The complete tender must not exceed 10 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in English.

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and the budgets will be contractually agreed as maximum limits. The specifications for pricing are defined in the price schedule.

8. Data protection considerations

In relation to the treatment and processing of personal and confidential data, GIZ takes the protection such data very seriously. The provision of the audit services may be associated with the processing of confidential by the contractor, who would alone define the nature of such data and how such processing would be carried out. The data that will be collected by the contractor as part of the energy audit process will be used solely for the purpose of developing energy consumption baselines and energy audit report of the three military bases. The service provider will also be required to adhere to the DoD safety and security requirements.

9. Annexes

- Annex A: Site Information (high-level site information of the military bases)
- Annex B: Minimum content of the energy audit report

10. Other Requirements

- Please submit your proposal (technical and price proposal) in separate files/folder to ZA_Quotation@giz.de no later than **5th April 2024** all documents must be in PDF.
- Submission to any other email address may invalidate your bid.
- Please do not mention any price for this measure on your cover letter/Technical proposal.
- Please submit your tax clearance certificate with the bidding documents.
- Please submit your price proposal in **ZAR**.
- Our General Terms of Conditions (attached) shall not be changed/amended should you be the winner of this tender. These General Terms and Conditions will form part of the contract should you be awarded this contract. By submitting your proposal, we will conclude that you have read and accepted these terms and conditions.
- Participating more than once in same tender is not allowed and it will lead to your proposal as well as that of the company where you appear more than once being disqualified. The responsibility rests with the companies to ensure that their partners/experts are not bidding/participating more than once in same tender.
- **Bidders are not allowed to communicate directly with any other person regarding this bid other than the procurement official/s. Failure to comply with this requirement may lead to your bid being disqualified.**
- Bidders must strictly avoid conflicts with other assignments or their own interests. Bidders found to have a conflict of interest shall be disqualified. Without limitation on the generality of the above, Bidders, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this EOI and tender process, if they:
 - a) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by GIZ or the Interim Supply Chain Management Council to provide services for the preparation of the design, specifications, Terms of Reference, cost analysis/estimation, and other documents to be used for the procurement of the services in this selection process;
 - b) were involved in the preparation and/or design of the programme/project related to the services requested under this EOI and tender;
 - c) are serving or have been serving in the past three months in the structures of the Interim Supply Chain Management; or
 - d) are found to be in conflict for any other reason, as may be established by, or at the discretion of GIZ.

Scientific data

In the event of any uncertainty in the interpretation of a potential conflict of interest, Bidders must disclose to GIZ, and seek GIZ's confirmation on whether or not such a conflict exists.

- Similarly, the Bidders must disclose in their proposal their knowledge of the following:
 - a) if the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel are family members of GIZ staff involved in the procurement functions and/or the Interim SCM Council or any Implementing partner receiving services under this EOI or tender; and
 - b) all other circumstances that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices.
- **Failure to disclose such an information may result in the rejection of the proposal or proposals affected by the non-disclosure.**

Bids sent via Dropbox and WeTransfer will not be accepted