



United Nations Industrial Development Organization

TERMS OF REFERENCE (TOR)

For the provision of services related to the expansion and reconditioning of the power coupling station named “PC5” for the implementation of the solar photovoltaic system of Santo Amaro – São Tomé Island

1. Introduction

The Global Environment Facility (GEF) funded project “Strategic program to promote renewable energy and energy efficiency investments in the electricity sector of São Tomé and Príncipe” is implemented by UNIDO in partnership with the Directorate-General for Natural Resources and Energy (DGRNE)¹ of the Ministry of Infrastructure, Natural Resources and Environment (MIRN, former MOPIRINA)² and the National Designated Authority (NDA) at the Ministry of Planning, Finance and Blue Economy (MPFEA), and other international partners (e.g. UNDP, WB/AFAP, AfDB).

São Tomé and Príncipe (STP) is a Small African Island Developing State (SIDS) located in the Gulf of Guinea, very close to the equator. STP comprises a total area of 1,001 km², including islands and islets (the two largest islands São Tomé with 859 km² and Príncipe with 142 km², including the adjacent islets). As a SIDS, STP faces specific challenges in relation to its size, remoteness from large markets, dependence on a small number of economic sectors, direct investment and remittances inflow, lack of resources, and a significant trade deficit. Key sectors of the economy are highly vulnerable to natural, climate, and external economic shocks. Moreover, it is important to highlight that the energy sector was identified as the first contributor in terms of greenhouse gas emissions (GHG) in the 2012 National Communication to the UNFCCC³.

In 2012, the total population of STP was 178,739 inhabitants with 51% women according to the General Demographics Census. The demographic projections from INE (National Institute of Statistics of STP) indicate that there will have been around 279,981 inhabitants by 2030⁴. In terms of economic rankings, the World Bank's (WB) Doing Business ranking (May 2019) places STP at 170th position out of 190 economies⁵. At the institutional level, the STP energy sector is led by MIRN through the Directorate-General for Natural Resources and Energy (DGRNE), and in the Autonomous Region of Príncipe (RAP), the sector is under the responsibility of the Regional Secretariat for Environment and Sustainable Development. The General Regulatory Authority (AGER) is responsible for regulating and supervising the energy sector, as well as the water and telecommunications sectors and postal services.

The generation, transmission, distribution, and commercialization of the electricity service is in charge of the National Water and Electricity Company (EMAE), which supplies electricity to a large part of the population. There are also some isolated diesel generation systems to supply electricity to those that are not connected to the electrical grid. The STP electrification rate is currently estimated at 87% (74% in Sao

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² Ministério das Obras Públicas, Infraestruturas, Recursos Naturais e Ambiente (MIRN)

³ UNFCCC: CQNUMC - Convenção-Quadro das Nações Unidas sobre a Mudança do Clima

⁴ ALER. (2019). Relatório Nacional do Ponto de Situação das Energias Renováveis e Eficiência Energética em São Tomé e Príncipe.

⁵ World Bank. (May de 2020). Ease of Doing Business Ranking. Available at: <https://www.doingbusiness.org/en/rankings?region=sub-saharan-africa>

Tomé, and 100% in RAP) with a total generation capacity of 24.5 MW (2018). In remote and rural areas, more than 20% of the population does not have access to reliable electricity services, and the majority of the people have no access to sustainable cooking services and rely on traditional biomass and charcoal.

The success of national development strategies highly depends on a power sector reform and a transformational shift of the entire energy system from a nearly complete fossil fuel import dependency to a low-carbon renewable energy and energy efficiency scenario. The dependency on fossil fuel imports for energy generation and transportation questions the macro-economic stability of the country and hampers the productivity of key island industries. Supporting the transition towards renewable energy will free-up scarce hard currency resources for social and economic development (e.g. education, health care, transportation, export diversification, business development) and climate change adaptation.

Currently, the country has one of the highest power generation costs in Sub Sahara Africa. The power sector remains subsidized, and consumer tariffs are not cost-reflective, affecting the macro-economic stability of the country. The national utility is not able to recover its costs. Moreover, the country faces challenges resulting from an outdated transmission and distribution system and a generation mix highly dependent on costly diesel. As a result, electricity supply is characterized by frequent power cuts and load shedding, forcing businesses and essential social service providers to run on diesel generators.

As part of the reform agenda, UNIDO and other international partners support the Government of STP in the creation of an enabling environment for renewable energy (RE) and energy efficiency (EE) investments in urban and rural areas and key island industries. Currently, the uptake of RE&EE product and service markets remains constrained by a broad range of barriers related to policy and regulation, institutional capacity, knowledge and awareness, qualification and certification, finance and local availability of technology and expertise. The RE baseline is limited to colonial run-off-river small-hydro power stations, of which only one is partly functional, and small solar PV applications for rural households and productive uses (e.g. irrigation for agriculture, telecommunication).

The developed *Least-Cost Power Development Plan* for STP includes a feasible and viable scenario to achieve a 50% RE penetration in the island grids of Sao Tome and Principe by 2030. The scenario is based on demand projections, as well as available renewable energy potentials and real project sites. The overall investment costs of this scenario amount to around USD 14,7 million (incl. required grid adaptation costs). In support of the implementation of the plan, UNIDO, United Nations Development Program (UNDP) and the African Development Bank (AfDB) assist the Government in the execution of a modular utility-scale solar PV project Santo Amaro (for São Tomé Island) with an electric capacity of 2.2 MWp.

To date, apart from some installations in isolated areas, there are no utility-scale PV power plants in operation in São Tomé and Príncipe. Most of the electricity comes from diesel generators based on high production costs due to the fuel supply chain dependent on the international market. By considering life-cycle costs and comparing the LCOE, solar PV is highly competitive in relation to existing diesel generation.

2. Specific issues addressed by the Terms of Reference

The scope of technical services and works at Santo Amaro diesel power plant is to implement a photovoltaic (PV) system for hybridization in two phases: a first phase of 550 kWp (PV1) and a second phase of 1,640 kWp (PV2). The first phase will be implemented with support of UNIDO and UNDP. It was agreed that UNDP will cover the costs of the PV system and **UNIDO the grid adaptation costs**. UNDP is currently contracting the supplier of the PV system. The second phase of the PV system will be implemented by AfDB. The electrical energy produced by the diesel generation system is fed into the STP electrical grid via the power coupling station named PC5 (see Annex 1); however, the PC5 is currently overloaded, and

its area requires to be expanded for the connection of new PV generators. In this regard, the expansion and reconditioning of the power coupling station PC5 for the connection of the whole photovoltaic system will be supported by the GEF-UNIDO project.

Santo Amaro is the main diesel power plant on the island of São Tomé. It is located north of the island close to the STP International Airport and it is operated by EMAE. The installations of the electrical power generation equipment were carried out in 3 steps:

- Santo Amaro 1 -ST1- (commissioned in 2009) – 5 diesel generators for a total power of 8.5 MW;
- Santo Amaro 2 -ST2- (commissioned in 2015) – 3 diesel generators for a total additional power of 6 MW;
- Santo Amaro 3 -ST3- (commissioned in 2020) – 5 diesel generators for a total additional power of 9 MW.

The electrical energy produced by the diesel generators is fed into the STP network via the PC5 power station. The 30kV AC (alternate current) cables are connected to the distribution station equipped with control and protection equipment. From PC5 start the power lines:

- For PC2 feeder: PC5 to PC2 overhead line;
 - For P1015 feeder: PC5 to P1015 overhead line;
 - For SE2 feeder: PC5 to SE2 overhead line;
- (These three are power lines at 30 kV that allow grid connection to the national grid, see Annex 2).

According to the *Feasibility Studies of the Santo Amaro Photovoltaic Plant. 2001-1006 Study of Connection to the Coupling Station No. 5* (see Annex 3), the following limitations were identified to connect the PV plants to the PC5:

- Insufficient space to connect the solar PV plants (PV1 and PV2) to the existing MV (medium voltage⁶) cells, the new space required is approximately of 30 m²;
- No possibility to put an intermediate MV cell to relocate the new cells into a new room;
- According to the plan of PC5 - two MV-cells are intended for STA 1 (Santo Amaro diesel power plant 1) (main and emergency connection);
- No additional space on another wall;
- The cable routing at PC5 for ST2 & ST3 is already well loaded, which makes an extension on that side rather difficult (west side of the building).

This same study proposes alternatives for reconditioning the coupling station PC5. Among these alternatives, “Alternative 4 / Scenario 4” was selected as the most convenient by the local counterparts of the project and aims to expand the area of station PC5 for the installation of new MV cells with a “U” busbar. Likewise, this alternative is complemented by "Variant 2" of the same study. It consists of adding an MV cell called "inter-bar breaker" to trigger the medium voltage cells (in the current building) from the cells that will be positioned in the new space. The injection on the power lines can therefore be independent. This configuration will allow:

- Better security of the installations;
- The possibility of additional work without a complete shutdown;
- Easier maintenance on PC5.

⁶ The medium voltage (MV) cell is a compact system combining all MV functional units to enable connection, supply and protection of a transformer. (Available at: <https://iopscience.iop.org/article/10.1088/0022-3727/40/10/017>).

It is worth indicating that the reconditioning of PC5 will be carried out in parallel with the implementation of the PV1 system (system to be implemented by UNDP). Both installations will take place before the implementation of the second phase of the PV system, PV2 for which the African Development Bank (AfDB) shall be responsible.

3. Objective, scope and deliverables of the of engagement

UNIDO seeks to engage with a contractor to expand and recondition the coupling power station PC5, part of the facilities of the Santo Amaro diesel power plant, to ensure the connection of a new PV system of 2.2 MWp and better dispatch coordination of the whole generation system. This engagement involves the expansion of the PC5 infrastructure, meeting the existing technical specifications, both civil and electrical. The grid works will be undertaken in a way, which will consider the later expansion of the PV system to the full capacity (PV2) funded by AfDB. The time scheduled for this second phase is currently unknown.

During the implementation of the contract, a kick-off meeting will be carried out between the UNIDO contractor and the relevant stakeholders of the project to agree on the main issues associated with the PC5 expansion and reconditioning. The contractor shall collaborate closely with the key institutions/agencies responsible for the implementation of the PC5 project (e.g. DGRNE, AGER, EMAE, UNDP, AfDB). It will be coordinated by UNIDO and the National Project Coordinator and his team at MIRN/DGRNE and EMAE in São Tomé and Príncipe, while the whole implementation of the PV system is being coordinated by UNDP and the national government.

Fieldwork is also required to identify and verify the equipment characteristics and needs. The contractor, in close coordination with UNIDO, shall organize meetings with the different stakeholders involved in this engagement (either in person or through other communication systems, for example, telephone calls, virtual meetings, etc., taking into consideration the restrictions of social distancing arisen from the COVID-19 pandemic, as applicable).

The contract shall take into account the *Feasibility Studies of the Santo Amaro Photovoltaic Plant. 2001-1006 Study of Connection to the Coupling Station No. 5* as a reference, which shall be adapted and detailed based on the site visit, consultation with stakeholders, as well as the review of national and international bibliography and best case examples applicable to this case. The engagement requires close coordination with MIRN/EMAE and the contracted company by UNDP to install the PV system.

The expansion and reconditioning of the power coupling station PC5 for the implementation of the solar photovoltaic system of Santo Amaro implies:

- Review of the *Feasibility Studies of the Santo Amaro Photovoltaic Plant. 2001-1006 Study of Connection to the Coupling Station No. 5* that defines the required work for the reconditioning and expansion of the coupling station PC5: “Alternative 4, Variant 2”;
- Electrical and civil design for the expansion and reconditioning of the PC5. These studies shall include the evaluation of the current structure and the required constructive updates for its expansion, the definition of the electric equipment such as cells, circuit breakers, connecting cables, communication protocols, among others;
- Civil work for extension of the PC5: back-to-back extension building to avoid cabling problems related to the current pathways, following the technical standards for buildings that allocates electric equipment (e.g. PC5). The thermal insulation shall be also considered based on the type of equipment to be installed, that need to take into account, environmental conditions at the site; low temperature, electric grounding, control of humidity, safety, as well as maintenance and upkeep requirements, etc.;

- Configuration and integration of the new equipment for electricity dispatch with the existing communication system at PC5, SCADA. The new equipment shall communicate with the existing ones;
- Installation of two new cells for PV1 and PV2;
- Installation of an MV cell “inter-bar breaker”;
- The installation of an intermediate Medium Voltage cell with circuit breakers;
- Installation of Medium Voltage cells with U-bar for the connection of new cells on the other side of the wall. The new installations shall consider the extension of the intended building, there is a need to join the interface;
- Relocation of the CTSA2-I and CTSA2-II MV cells (medium voltage cells);
- The construction of a new cable tray for the connection of the relocated cells and the new cells;
- Acquisition and assembly of electric equipment, according to the PC5 feasibility study and the electrical design, that is, the company will purchase the equipment, following the standard and technical characteristics defined by EMAE;
- Electrical connection and wiring;
- Integration with the existing control system;
- Testing and commissioning;
- Maintenance and operating manuals and training.

Specifically, the contractor is expected to provide the following results:

- Updated PC5 design (civil and electrical), considering the implementation of the PV plant of 2.2 MWp;
- Execution of the civil work for the expansion of the coupling power station PC5, including detailed bill of quantities and according to the technical criteria established by EMAE;
- Acquisition, installation, and configuration of the electric equipment for the reconditioning of the PC5;
Final delivery of the work meeting the technical requirements of civil and electrical construction in accordance with the EMAE’s approval and the communication protocol requirements of the concessionaire’s existing system. The contractor shall consider the option validated by EMAE in the abovementioned feasibility study that implies the previously listed activities (installation of an MV cell “inter-bar breaker” and two new cells for PV1 and PV2 in the new space in the building). The PC5 shall be tested and commissioning, and its operation shall be under satisfaction and approval of EMAE.
- Finally and in order to support the efforts on the national level, one-day training shall be developed by the service provider. The training will involve the operation and configuration of the new installed equipment, including dependencies on the operation of the PV1 and the possibility to do further changes to the configuration. The service provider will be responsible for the design and implementation of the training as well as the needed material under the approval of UNIDO/MIRN. The training will be held physically in STP. EMAE’s technicians and other technical personal designated by the local utility will participate in the training (to ensure knowledge sharing and understanding, a maximum of 10 technicians will receive the training).

Note: It is important to specify that the SCADA system must be updated and integrated with the Control Units (UCs) of the PC5 and the Dispatch Center.

4. Scope of work, time and tentative payment schedule

TASKS	DELIVERABLES IN PORTUGUESE	TENTATIVE PAYMENT SCHEDULE
<p>1. Elaboration of an inception report including detailed work plan</p>	<p><u>Inception report</u></p> <p>To be approved by UNIDO and MIRN after consultation with the project team and the project stakeholders (incl. detailed activity plan, team composition, time schedule, list of key stakeholders, schedule of stakeholder meetings and training); the inception report shall include a short update on the PV installation works and minutes of a meeting with the contractor;</p>	<p><u>10%</u></p> <p><i>Upon approval of reports by UNIDO, MIRN and EMAE</i></p>
<p>2. Electrical and civil design for the expansion and reconditioning of the PC5</p> <p><i>The start of this task requires approval by UNIDO and depends on progress regarding the contracting of the PV equipment supplier by UNDP</i></p>	<p><u>Electrical design – report</u></p> <p>Max. 30 A4 pages in Portuguese (excluding annexes such as the work plans, bills of quantities and budgets). The report shall summarize the main considerations for the execution of the project, and shall include the list of equipment and materials, as well as the technical and economic analyses, and the total cost of turn-key equipment.</p> <p><u>Project expansion of the PC5 building – report</u></p> <p>Max. 30 A4 pages in Portuguese (excluding annexes such as plans and budgets). The report shall summarize the main considerations for the expansion and civil works of the PC5 and its execution, and shall include the list of materials, and the technical and economic analyses, and the total budget.</p> <p>The reports will be delivered as two separate documents.</p>	<p><u>20%</u></p> <p><i>Upon approval of reports by UNIDO, MIRN and EMAE</i></p>
<p>3. Execution of the civil work for the PC5 expansion</p> <p><i>The start of this task requires approval by UNIDO and depends on the</i></p>	<p><u>Short report of the execution work</u></p> <p>Execution of the expansion of the PC5 building, considering all</p>	<p><u>20%</u></p> <p><i>Upon approval of reports and minutes by UNIDO, MIRN and EMAE</i></p>

<p><i>achieved progress of the PV installation company contracted by UNDP.</i></p>	<p>criteria agreed with the concessionaire-EMAE</p> <p><u>Delivery – Receipt Minutes of the implementation and expansion of the building of the PC5</u></p> <p>Delivery – receipt minutes of the civil work execution between the consulting company and EMAE.</p>	
<p>4. Acquisition, installation and configuration of the electrical equipment at PC5</p> <p>4.1. Acquisition of the electrical material/equipment</p> <p>4.2. Installation and configuration of the electric system of the PC5</p> <p><i>The start of this task requires approval by UNIDO and depends on the achieved progress of the PV installation company contracted by UNDP.</i></p>	<p><u>Short report of the acquired material/equipment and the installation and configuration of the electric system at PC5</u></p> <p>The report shall include the list of purchased material/equipment (according to section 2) and summarize the main considerations for the installation and configuration of the electric system at PC5; incl. financial documentation;</p> <p><u>Delivery – Receipt Minutes of the installation and configuration of the equipment</u></p> <p>Delivery – Receipt Minutes of the implementation and configuration of the electrical systems and equipment installed at PC5. These shall be in full operation and comply with the technical specifications established by EMAE based on the equipment already installed.</p>	<p><u>30%</u></p> <p><i>Upon approval of reports and minutes by UNIDO, MIRN and EMAE</i></p>
<p>5. Testing, commissioning, and training</p>	<p><u>Delivery – Receipt Minutes of the testing and commissioning of the PC5</u></p> <p>Delivery – Receipt Minutes of the testing and commissioning of the PC5 between the consulting company and EMAE, including training on the equipment and its operation to EMAE.</p>	<p><u>20%</u></p> <p><i>Upon approval of reports, minutes and training material by UNIDO and EMAE</i></p>

	<u>Short report on the training</u>	
	The report shall include a list of participants and the main content of the training (tackled topics).	

The activities under this contract are expected to be completed within a period of 5 (five) months from the effectiveness of the contract. **The contractor shall ensure close cooperation with the PV equipment supplier contracted by UNDP.** Due to the COVID-19 crisis, UNIDO and the contractor may adapt the time schedule as required (inception phase). In case of unforeseen delays (e.g. COVID-19, delays in execution of the UNDP supplier, etc.), UNIDO and the contractor may agree on an extension of the contract timelines (without budget increase). Additionally, it is worth indicating that the implementation of the PC5 will depend and only be possible when the PV1 implementation starts.

The proposed tentative time plan for implementation of activities and deliverables:

Derivables	Months				
	1	2	3	4	5
Inception Report, including detailed work plan					
Electrical and civil design for the expansion and reconditioning of the PC5					
Execution of the civil work for the PC5 expansion					
Acquisition, installation and configuration of the electrical material/equipment at PC5					
Testing, commissioning, and training					

In addition, the contractor will be required to deliver the following:

- Item **High-resolution photographs (min. 3 MB, at least 20)** – that illustrate the undertaken activities.
- Item **All used raw files and calculation sheets** in editable form (e.g. xls). All files need to be handed over and become property of MIRN and UNIDO. Collected data will be distributed through the national energy information system.

5. Coordination and Reporting

Regular progress reports will be provided in line with the contract. The reports are to include all relevant technical and financial information including documentation of all payments (e.g. invoices of equipment, copies of boarding cards, invoices for flight bookings, etc.). The reports will be provided in Portuguese in digital form. The reports shall include also digital photo documentation for free use by UNIDO. A final report, upon completion of the work describing all the works performed under the contract and project documentation, shall be submitted to UNIDO after completion of the activities and services under the contract. The contractor will report to the UNIDO, the National Project Coordinator and his team at MIRN/DGRNE and EMAE in São Tomé and Príncipe. Moreover, the contractor will coordinate closely with other partners, particularly UNDP, AfDB and the contracted PV installation company. All works and

deliverables are subject to approval by UNIDO and MIRN/EMAE. The contractor will coordinate on a day-to-day basis closely with the local UNIDO team at MIRN/EMAE. The local team will support the contractor but it is the overall responsibility of the contractor to guarantee the quality of the work through its local team.

6. Qualification, evaluation and language criteria

Bidders need to comply with and will be evaluated according to the following criteria:

MINIMUM QUALIFICATION REQUIREMENTS		VALUE	SCORE
MANDATORY			
1	Registered consulting company or institution as a legal entity with at least fifteen (15) years of public and private experience in implementation activities for electricity service (please provide a copy of the <u>Certificate of Incorporation</u>).	Yes	qualify
		No	does not qualify
2	Financial Strength of the company. Please provide the completed and signed <u>UNIDO Financial Statement Form</u> .	Yes	qualify
		No	does not qualify
3	Completed and signed Statement of Confirmation (Annex 4 to the TOR).	Yes	qualify
		No	does not qualify
4	Completeness of the technical and separate financial offer (e.g. CVs, track-record, legal and financial documents, all-in price incl. all taxes).	Yes	qualify
		No	does not qualify
5	Full proficiency in Portuguese; at least one team member (preferable the team leader is proficient in English). Ability to produce reports and conduct meetings in both languages is required;	Yes	qualify
		No	does not qualify
6	The project team demonstrates a solid combination of technological knowledge and work experience in the following areas: <ul style="list-style-type: none"> - Electric power systems; - Medium Voltage Electrical Services; - Civil construction work; - Knowledge of the energy sector of STP (institutionalism, regulatory framework, energy efficiency for grid-connection issues, etc.) - Ability to conduct meetings in situ, as well as through other means of communication. 	convincing	qualify
		poor	Does not qualify
7	The Team Leader holds at least a master's degree in engineering and demonstrates at least fifteen (15) years of consulting experience in electric power systems. The Team Leader needs to demonstrate relevant experience with similar complex assignments in Sub Sahara Africa. The expert will convene a team of specialists (that includes at least one Expert in grid connection works and medium voltage) which demonstrates a proven track record and relevant experience in projects related to this assignment. The work-time diagram reflects the substantial involvement of the Team Leader.	convincing	qualify
		poor	does not qualify
8	At least one Expert in grid-connection works and medium voltage with an advanced degree in engineering, science, energy or another relevant discipline is part of the project team. The Expert in grid connection shall have a minimum of seven (7) years of professional consulting experience in grid connection at medium voltage. Integration of RE (renewable energy) projects to the grid is an asset. She/he must demonstrate experience in grid-connection at medium voltage. The work-time diagram reflects the substantial involvement of the grid-connection and medium voltage Expert.	convincing	qualify
		poor	does not qualify

9	One Construction Advisor with an advanced degree in civil engineering. The Construction Advisor shall have a minimum of five (5) years of professional experience in building construction/refurbishment.	convincing	qualify
		poor	does not qualify
10	Track-record and work experience of the <u>proposed project team</u> (not only for the company) in Africa (including Lusophone Africa) is a requirement for the team. The employment of domestic expert(s) in line with local consultancy rates is a requirement; sufficient working days for local consultants are included in the work-time diagram.	Yes	qualify
		No	does not qualify
NON-MANDATORY			
1	Immediate availability of the contractor; ability to implement the assignment despite the COVID-19 travel restrictions.	Yes	
		No	
	TECHNICAL EVALUATION CRITERIA	VALUE	SCORE
1	Quality and coherence of the overall technical offer and efficiency of the proposed execution modality and team set-up; technical offers shall reflect the analytical capacity of the project team and avoid just a repetition of the text in the TOR).	convincing	20%
		regular	10%
		poor	0%
2	Quality of the proposed methodologies to elaborate the deliverables of this assignment; provided references to similar local/international experiences related to the scope of this assignment	good	20%
		regular	10%
		poor	0%
3	Quantity and quality of the provided track-record and work experience of the project team regarding electric power systems, grid-connection at medium voltage, building construction/refurbishment (please provide examples/evidence of documents co-authored by team members).	good	20%
		regular	10%
		poor	0%
4	Quantity and quality of the provided track-record of written similar studies, reports, certificates of experience about medium voltage services, electric power systems, civil works. Experience in grid connection of RE projects is an asset. The bidder shall include evidence on developed reports.	good	20%
		regular	10%
		poor	0%
5	Scope of work experience in Sub Sahara Africa or similar island contexts; work experience in the energy sector of other Portuguese-speaking countries, specially in STP is an asset.	good	20%
		regular	10%
		poor	0%
	MAXIMUM SCORE		100%

In accordance with UNIDO procurement award criteria, the acceptable technical bid with the lowest (**all-inclusive**) price will be awarded. Only technical proposals with a quality score of 70% or more will qualify for the financial assessment. UNIDO reserves the right to request additional information from bidders if necessary.

7. Application Procedure

Interested and qualified bidders shall submit their written proposals either in Portuguese or English:

- **Technical Proposal** (including proposed approach and methodology, work and activity plan, detailed CVs of experts, copies of university degrees, certifications, licenses as well as a proven track record of implemented assignments); the proposal shall refer to previous experiences related to the scope of this assignment;
- Separate **Financial Proposal** in USD including all costs and taxes (includes a detailed work-time-expert-diagram indicating daily rates for individual team members); offers without clearly stating the all-in price will be rejected;
- Documents demonstrating the quality of the track-record of the project team with regard to areas such as grid connection, medium voltage consulting, and civil works.

In case of technical difficulties in submitting proposals through the e-procurement portal of UNIDO, please contact the UNIDO Help Desk at procurement@unido.org. Kindly explain the issues, attach screenshots for assistance.

8. Further information

- GEF-UNIDO CEO Endorsement Document, <https://open.unido.org/projects/ST/projects/150124>
- GEF Project Website: <https://dgrne.org>
- Relatório Nacional do Ponto de Situação das Energias Renováveis e Eficiência Energética em São Tomé e Príncipe”, ALER/UNIDO (2020), <https://www.aler-renovaveis.org/en/activities/publications/national-reports/sao-tome-and-principe-renewable-energy-and-energy-efficiency-status-report/>
- www.unido.org and www.gn-sec.net
- UNIDO Opendata Platform: <https://open.unido.org/>
- The following Annexes will be shared with interested and registered companies by the e-procurement portal under request:
 - Annex 1: PV power plant configuration, layout and location (separate file)
 - Annex 2: Map of the Santo Amaro diesel power plant (separate file)
 - Annex 3: Feasibility Studies of the Santo Amaro Photovoltaic Plant. 2001-1006 Study of Connection to the Coupling Station No. 5 (in Portuguese) (separate file)
 - Annex 4: Statement of Confirmation

9. List of acronyms

AC	Alternate current
AfDB	African Development Bank
AGER	General Regulatory Authority
CTSA2-I	Medium voltage cells, Santo Amaro 1
CTSA2-II	Medium voltage cells, Santo Amaro 2
DGRNE	Directorate-General for Natural Resources and Energy
EE	Energy Efficiency
EMAE	National Water and Electricity Company
INE	National Institute of Statistics of STP
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	greenhouse gas emissions
MIRN	Ministry of Infrastructure, Natural Resources and Environment
MPFEA	Ministry of Planning, Finance and Blue Economy
PC5	Power Coupling station
PV	Photovoltaic
PV1	Photovoltaic system, first phase
PV2	Photovoltaic system, second phase
RE	Renewable Energy

RAP	Autonomous Region of Príncipe
SIDS	Small Island Developing State
STA	Santo Amaro Diesel power plant 1
STP	São Tomé and Príncipe
ST1	Santo Amaro Diesel Power Plant 1
ST2	Santo Amaro Diesel Power Plant 2
ST3	Santo Amaro Diesel Power Plant 3
UC	Control Units
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

10. Annex 4



STATEMENT OF CONFIRMATION

On behalf of (insert name of company or institution): _____, I hereby attest and confirm that the company/organization:

- a) Possesses the legal status and capacity to enter into legally binding contracts with UNIDO for the supply of equipment, supplies, services or work.
- b) Is not insolvent, in receivership, bankrupt or being wound up, and not under administration by a Court or Judicial Officer, and that it is not subject to the suspension of its business or legal proceedings for any of the foregoing reasons.
- c) Has fulfilled all its obligations to pay taxes and social security contributions.
- d) Has not, and that its Directors and Officers have not, within the last five years been convicted of any criminal offence related to professional conduct or the making of false statements or misrepresentations as to their capacity or qualifications to enter into a procurement or supply contract.
- e) Pursues zero tolerance policy to all forms of corruption, including extortion and bribery.
- f) That UNIDO, in the event that any of the foregoing should occur at a later time, will be duly informed thereof, and in any event, will have the right to disqualify the company/institution from any further participation in its procurement proceedings.
- g) That UNIDO shall have the right to disqualify the company/institution from participation in any further procurement proceedings, if it offers, gives or agrees to give, directly or indirectly, to any current or former staff member of UNIDO a gratuity in any form, an offer of employment or any other thing of service or value, as an inducement with respect to an act or a decision of, or a procedure followed by UNIDO in connection with a procurement proceeding.
- h) Does not have any conflict of interest such as the following:
 - i. None of the bidder's key personnel is associated - financial, family, employment wise - with concerned UNIDO officials, UNIDO experts/consultants recruited under the relevant project;
 - ii. no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the offer, have been given, received, or promised in connection

- with the subject ITB;
- iii. company and/or its affiliates did not participate in the preparation of the concerned procurement process, its design or the bidding documents, including, but not limited to, the technical specifications, terms of reference, and the scope of works, being subsequently used by UNIDO;
 - iv. the company directly or indirectly controls, is controlled by or is under common control with another bidder;
 - v. receives or has received any direct or indirect subsidy from another bidder;
 - vi. has the same legal representative as another bidder;
 - vii. has a relationship with another bidder, directly or through common third parties (except declared sub-contractors), that puts it in a position to influence the bid of another bidder, or influence the decisions of UNIDO regarding the bidding process;
 - viii. submits more than one bid in the bidding process, for example, on its own and separately as a joint venture partner (except as declared sub-contractor) with another bidder. A bidder's submission of more than one bid (except as declared sub-contractor) will result in the disqualification of all bids in which such bidder is involved; or
- i) The company is not debarred from business with the United Nations and other organizations;

Name (print): _____

Signature: _____

Title/Position: _____

Place (City and Country): _____

Date: _____