



TERMS of REFERENCE (TOR)

For the delivery of specialised services related to the development of the National Sustainable Energy Investment Plan (NSEIP) for São Tomé and Príncipe

UNIDO Project Title:

“Building institutional capacity for a renewable energy and energy efficiency investment programme for STP” (ID 200158)

Date: revised 03 January 2025

1. GENERAL BACKGROUND INFORMATION

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mission of UNIDO, as described in the *Lima Declaration* adopted at the fifteenth session of the UNIDO General Conference in 2013 as well as the *Abu Dhabi Declaration* adopted at the eighteenth session of the UNIDO General Conference in 2019, is to promote and accelerate inclusive and sustainable industrial development (ISID) in Member States. The relevance of ISID as an integrated approach to all three pillars of sustainable development is recognized by the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), which will frame the United Nations and the country's efforts towards sustainable development. UNIDO's mandate is fully recognized in SDG-9, which calls to “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. The relevance of ISID, however, applies to a greater or lesser extent to all SDGs. Accordingly, the Organization's programmatic focus is structured in four strategic priorities: Creating shared prosperity; Advancing economic competitiveness; Safeguarding the environment; and Strengthening knowledge and institutions.

The Democratic Republic of São Tomé and Príncipe (STP), a small island developing state (SIDS) and least developed country (LDC), located in the Gulf of Guinea, about 380 km west of the coast of Central Africa. The islands occupy an area of 1,001 km² and consist of the larger island Sao Tomé, the smaller island Príncipe, and several tiny islets. Sao Tomé (area of 859 km²) is about six times larger and four times more densely populated than Príncipe (142 km²). Like many other SIDS, the island nation 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. Moreover, key sectors of the economy are highly vulnerable to natural, climate, and external economic shocks.

UNIDO in partnership with the General Directorate for Natural Resources and Energy (DGRNE) of the Ministry of Infrastructure and Natural Resources (MIRN, former MOPIRINA) and the National Designated Authority (NDA) at the Ministry of Planning, Finance and Blue Economy (MPFEA) are implementing the GCF readiness project “Building institutional capacity for a renewable energy and energy efficiency investment programme for São Tomé and Príncipe”. It is being executed in close coordination with the ongoing GEF-funded UNIDO project “Strategic program to promote renewable energy and energy efficiency investments in the electricity sector of STP”. It is also linked with the regional activities of the Central African

Centre for Renewable Energy and Energy Efficiency (CEREEAC), which was recently established by UNIDO and the Economic Community of Central African States (ECCAS) in Angola, Luanda.

The project contributes to the nation's Vision 2030 "São Tomé e Príncipe 2030: the country we need to build", which aims to transform the country into a climate-resilient and vibrant island hub for blue economy business, financial services and tourism, benefitting from the growing regional market of the ECCAS. The success of the vision 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 renewable energy and energy efficiency.

The principal objective of the GCF Readiness project is to assist the Government in the formulation of a comprehensive renewable energy and energy efficiency (RE&EE) investment program aimed to achieve the set climate mitigation targets in the 2021 Nationally Determined Contribution (NDC). The focus of the support lies on creating an enabling policy and regulatory environment and to strengthen the capacities of key stakeholder of the energy system through targeted trainings, tools and guidelines. In the area of EE, the emphasis lies on electric appliances, commercial grid-losses, low-carbon transport, as well as clean cooking. The RE activities focus is on distributed solutions, entrepreneurship, independent power producers, as well as innovative solutions, such as smart grids and ocean energy.

Further information on the project is available at:

<https://open.unido.org/projects/ST/projects/200158> and <https://dgrne.org/en/directorate/directorate-energy>

2. Specific issues addressed by the assignment

Over the past five years, STP has achieved significant progress in creating an enabling environment for RE&EE market uptake and investments. With support of the GEF/GCF funded UNIDO projects and other international partners a number key policies, roadmaps and regulations were developed and first utility-scale solar PV and small hydropower projects are under installation or in an advanced planning stage.

UNIDO supported the Government in the development of the *National Renewable Energy Action Plan (NREAP)* and the *National Energy Efficiency Action Plan (NEEAP)*, which aim at 73% renewable penetration of installed grid capacity by 2030/2050, as well as an energy demand reduction of 8.7% by 2030 and 12.9% by 2050. Both documents have adopted a holistic energy vision and include specific targets and actions for important subsectors, including grid-connected and distributed RE, clean cooking, efficient appliances and low-carbon transport. For these subsector various plans and roadmaps were developed.

The *2023 STP Green Energy Acceleration Plan (GEAP)* for the island São Tomé was developed with assistance of the African Development Bank (AfDB) and includes a robust investment scenario for RE generation and grid infrastructure by 2030/2050. The plan is based on a pipeline of projects, which were prioritised in accordance with a least cost analysis and other parameters. The investment need for the "Low, Base and High" RE scenarios was estimated with 277, 385 and 532 million EUR respectively.¹

¹ <https://dgrne.org/sites/default/files/2024-05/ST%20GEAP%20Final%20Report%20opt.pdf>

Regarding the decarbonisation of land transport, UNIDO supported the development of the *National Roadmaps for Transport Fuel Economy and Electric Mobility*.² Both documents recommend a phased introduction of fuel quality standards, age restrictions and emission standards for imported vehicles, and propose an incentive package to unlock electric vehicle sales and investment in charging infrastructure. Regulations are currently under approval.

Moreover, UNIDO supported the development of the *National Action Plan and Strategy on Clean and Modern Cooking (PNACLM)*, which aims to reduce the use of traditional biomass for cooking and to increase access to clean cooking appliances to 50% by 2030 and 100% by 2050. Furthermore, based on a detailed analysis of the market for electric appliances, UNIDO supported the development of *Minimum Energy Performance Standards (MEPS) and a Compliance and Labelling Framework for Lighting, Air conditioning and Refrigeration*.³ Respective regulations are currently under approval.

The established RE&EE policy framework contributes to the required paradigm shift to achieve the set national climate mitigation targets of STP. In the 2021 Nationally Determined Contribution (NDC) the Government commits to cut emissions by 109 kTCO₂eq, corresponding to an annual 27% reduction by 2030. This is being mainly achieved by increasing the RE share in the electricity mix, various energy efficiency measures and the decarbonisation of the transport sector. The total costs of these actions are estimated with USD 150 million.⁴ Recently, the World Bank Group (WBG) has started works on a STP decarbonisation plan, which will summarise and complement the above-mentioned policy documents.

With these policies, the Government has set quantifiable RE&EE targets for various subsectors and has proposed concrete actions to achieve them by 2030/2050. However, by considering the fiscal constraints, the weak financial system and investment environment in STP, it remains unclear how the paradigm shift can be financed by public and private sources. An undertaken readiness assessment of the local banking sector has revealed significant constraints regarding RE&EE financing.⁵ The financial sector is at its infant stages and interest rates are high, particularly for more risky infrastructure projects. Furthermore, with the small market size, geographic isolation, high risks and regulatory uncertainty, it is difficult to attract private participation, foreign direct investment and international finance.⁶ The Government needs a “sales pitch” on the various RE&EE investment and business opportunities.

Therefore, UNIDO is seeking consultancy support to develop the STP National Sustainable Energy Investment Plan (NSEIP), which will inform on the various RE&EE investment and business opportunities and provide insights on how the current national financial and investment framework can be enhanced to raise the required resources for the energy transition in a cost-effective manner without putting additional stress on the public budget and consumers.

² <https://www.gn-sec.net/publications/roadmaps-standards-and-regulations-improved-transport-fuel-economy-and-electric>

³ <https://www.gn-sec.net/publications/minimum-energy-performance-standards-meps-lighting-refrigeration-and-air-conditioning>

⁴ [Updated_NDC_STP_2021_EN_.pdf \(unfccc.int\)](#)

⁵ [https://dgrne.org/sites/default/files/2024-](https://dgrne.org/sites/default/files/2024-06/Avalia%C3%A7%C3%A3o%20oportunidades%20sector%20banc%C3%A1rio_vers%C3%A3o_12_04_24.pdf)

[06/Avalia%C3%A7%C3%A3o%20oportunidades%20sector%20banc%C3%A1rio_vers%C3%A3o_12_04_24.pdf](https://dgrne.org/sites/default/files/2024-06/Avalia%C3%A7%C3%A3o%20oportunidades%20sector%20banc%C3%A1rio_vers%C3%A3o_12_04_24.pdf)

⁶ <https://www.oecd.org/en/topics/sub-issues/small-islands-developing-states.html>

Objectives, scope and deliverables of the assignment

The main objective of the contracted UNIDO assignment is to develop the São Tomé and Príncipe National Sustainable Energy Investment Plan (NSEIP), which maps and quantifies the investment and business opportunities linked to the set RE&EE targets of the Government in the various of RE&EE areas by 2030 and 2050. The document will advocate for STP as “the place” to invest in sustainable energy and will outline an ambitious investment program, to be presented by the Government to interested financiers, investors and industry.

Phase 1: Develop a baseline report to identify, categorise and quantify the RE&EE investment and business opportunities by 2030 and 2050 and to provide recommendations for and enhanced national finance and investment framework.

The NSEIP will be informed by a baseline assessment, which identifies, categorises and quantifies the RE&EE investment and business opportunities in STP by 2030 and 2050. The baseline report will equally focus on São Tomé and the Autonomous Region of Príncipe (RAP). The contractor shall apply a mix of methodologies and gather information and data through desk research and by consulting the main players of the energy and financial system.

Regarding the subsector utility-scale RE and grid enforcement, the baseline report can rely on the already existing investment scenario and project pipeline of the GEAP. For other subsectors, such as distributed renewables, efficient appliances, clean cooking, low-carbon transport and electric mobility baseline reports exist, but additional research and potential modelling of investment volumes and/or market sales/shares need to be done. Due to the limited financial scope of the assignment, it is understood that some of the financial projections will need to remain based on assumptions.

The report will assess the effectiveness of the current national financial and investment framework and provide recommendations on how it can be enhanced to raise the required resources for the energy transition in a cost-effective manner without putting additional stress on the public budget and consumers. The report will provide concrete suggestions on how to mobilise different types of public-private financing (e.g. grants, commercial and concessional loans, equity). It will propose potential regulatory improvements and fiscal and non-fiscal incentives to better attract foreign investors and joint ventures. In this context, the consultant will also consider international best practice, innovative modalities and instruments (e.g. green bonds, debts SWAPs, PPPs, guarantees, crowdfunding), as well new potential funding partners (e.g. foundations, donors, development banks).

Phase 2: Development of the NSEIP and “sales pitch” leaflets/desks on each investment and business opportunity

The NSEIP presents and quantifies the identified RE&EE investment and business opportunities by 2030 and 2050 and creates a link to the set sustainable energy and climate targets of the Government. Major emphasis lies on producing a practical, well-designed and marketable document with concrete facts and figures, rather than “abstract” modelling projections of costs and required investments. The document outlines an ambitious investment program, to be presented by the Government to interested domestic and foreign

investors, financiers and industry. It should also motivate local entrepreneurs to get active and participate in the value chains of sustainable energy manufacturing and servicing.

The plan will equally focus on São Tomé and the Autonomous Region of Príncipe (RAP). The document shall present background information and financial key indicators on the prioritized RE&EE investment and business opportunities in an appealing and easy-to-digest form. These opportunities cover at least the following areas: utility-scale renewable energy, storage and grid flexibilization, smart grids and distributed renewable energy solutions in urban (e.g. net-metering, prosumers) and rural areas for households and productive uses, efficient appliances and clean cooking, efficient transport and electric mobility. For each investment and business opportunity a pitch leaflet and slide deck will be developed. A special leaflet and slide deck will exclusively promote the opportunities on the island of Príncipe.

The NSEIP needs to respond to different types of opportunities, some linked to “hard” infrastructure investment and operation, others more related to market shares and sales of products or services (e.g. efficient lighting, clean cooking appliances, RE stand-alone systems, electric vehicles). The latter will focus more on presenting market share/sales opportunities for local and regional producers, distributors or retailers. The provided information will be particularly useful for existing companies, which would like to expand their offer to STP or start-ups, which need to develop their business plans in areas such as clean cooking, RE stand-alone systems or electric vehicles (e.g. two-wheelers). The NSEIP will indicate the different types of public-private financing required for each of the opportunities by 2030 and 2050.

Some of the presented opportunities can be also categorised as “soft” or of institutional nature (e.g. cost of enforcement of regulations or standards, training needs, educational programs). Usually, all mentioned areas will require significant investment in human resources and skills development.

Phase 3: Stakeholder consultations, validation workshop and webinar

The development of the baseline assessment and the NSEIP requires broad consultations with key energy and financial stakeholders in STP (including the island Príncipe) but also with financial institutions, investors and experts abroad (at least 40% women and 30% youth participation in the consultations envisaged). DGRNE will provide relevant stakeholder lists and contacts. Both documents will be based on the review of existing documents and the collection of complementary gender-sensitive investment, finance and market data.

- Regular meetings with the team of UNIDO, DGRNE and the NDA will be organised on a monthly basis or as agreed; an inception mission to collect relevant data is required in the initial phase of the assignment (travel costs to be included in the financial offer). The mission shall include a visit to RAP;
- Each document requires at least two rounds of comprehensive review by UNIDO, DGRNE and the NDA. Both documents will be presented to the technical committee established by the Government (online). Afterwards the received comments will be incorporated.

- One physical workshop will be organised to validate the NSEIP and the recommendations of the baseline report (at least 40% women and 30% youth participation envisaged). The contractor will conduct the workshop and provide all contents and materials. It will also include a training session on innovative climate financing instruments potentially applied in STP. UNIDO and DGRNE will take care of the invitations, logistics and organisation.
- On completion of the documents, UNIDO, DGRNE and CEREAC will organise a webinar to present the NSEIP and its investment and business opportunities to the wider audience. The consultants will prepare and present the relevant contents. UNIDO and DGRNE will provide the online platform and invite key stakeholders of the Global Network of Regional Sustainable Energy Centres (GN-SEC).

3 Detailed tasks, deliverables and timeline

All produced end-products need to be provided by the contractor fully edited, designed (incl. graphs) and ready to be developed in Portuguese and English. All the documents are subject to rounds of quality reviews and feedback loops, which might take some time and cause longer delays. It is required to develop the documents first in Portuguese. The detailed deliverables of the assignment are explained below:

Tasks/Activities	Deliverables	Tentative schedule	Location
<p>1. Inception meeting and work plan validation</p> <p>The contractor will provide an inception report, incl. a detailed work-time diagram, applied methodology, list of key literature, stakeholders, schedule of consultations, and indicative tables of content for the baseline study and the NSEIP. The inception report and commencement of the assignment require approval by UNIDO, DGRNE and NDA. At least two online inception meetings will be required.</p>	<p>Inception report Max. 5 A4 pages in Portuguese incl. detailed activity plan, time schedule, list of key literature, applied methodologies, schedule of stakeholder consultations, indicative tables of content of assessment reports in Portuguese.</p>	<p>One month after contract signature (3 working days)</p>	Home based
<p>2. Develop a baseline report to identify, categorise and quantify the RE&EE investment and business opportunities by 2030 and 2050 and provide recommendations for the enhancement of the national finance and investment framework</p>	<p>One (1) Max. 60 A4 pages baseline assessment report provided, fully edited and designed, ready to be published in Portuguese and English. The report</p>	<p>Four months after contract signature (35 working days)</p>	Home based and in STP

	<p>will be first developed in Portuguese and afterwards translated to English.</p> <p>Set of data in xls. or/and CSV format provided for integration in the STP energy information system, incl. editable graphs and potential modelling files.</p>		
<p>3. Development of the NSEIP and “sales pitch” leaflets/desks on each investment and business opportunity</p>	<p>One (1) Max. 60 pages A4 NSEIP provided, fully edited and designed, ready to be published in Portuguese and English. The report will be first provided in Portuguese and afterwards translated to English.</p> <p><u>NSEIP pitch leaflets and slide desks</u> fully edited and designed, ready to be published in Portuguese and English.</p> <p>Set of data in xls. or/and CSV format provided for integration in the STP energy information system, incl. editable graphs and potential modelling files.</p>	<p>Six months after the contract signature</p> <p>(35 working days)</p>	<p>Home based and in STP</p>

<p>4. Facilitate stakeholder consultations, one physical validation workshop and one webinar on the NSEIP</p> <ul style="list-style-type: none"> - Regular meetings with the team of UNIDO, DGRNE and the NDA (monthly or as agreed); - Inception mission and broad stakeholder consultations to collect relevant data at least 40% women and 30% youth participation envisaged); - Presentation of the baseline and NSEIP to the technical committee by online means (or physically); - One (1) physical workshop to validate NSEIP and training session on innovative climate financing instruments (at least 40% women and 30% youth participation envisaged); - Organisation of one (1) webinar to present the NSEIP and its investment and business opportunities. 	<p><u>Deliverables in Portuguese:</u></p> <ul style="list-style-type: none"> - Meeting minutes in project related engagements - Report on the inception mission - Minutes of the technical committee meetings - Report on the validation workshop, presentations and training slides - Recording and presentations of NSEIP webinar 	<p>Eight months after contract signature (7 working days)</p>	<p>Home-based and in STP</p>
<p>5. Total</p>		<p>Eight months of contract duration</p> <p>Tentatively 60 working days (international rates) and 20 working days (local rates)</p>	

4 Deliverables and Time Distribution

The activities under this contract shall be completed within eight (8) months from the effectiveness of the contract. It is a requirement that the contractor employs at least one local

expert in STP (local consulting fees apply) to ensure quality data and local buy-in. The work-time diagram is indicated below:

Deliverables	Months								Payment Schedule
	1	2	3	4	5	6	7	8	
Deliverable 1 – Inception report									20%
Deliverable 2 – Final Baseline report									30%
Derivable 3 Final NSEIP report & leaflets and slide decks									35%
Deliverable 4 – Validation workshop and webinar									15%

The documents will be provided by the contractor fully edited, designed (incl. graphs) and ready to be published in Portuguese and English; All documents will include an executive summary at the beginning. 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. The consultants will cede all appertaining rights to unlimited use of the respective pictures to UNIDO and the Government of STP.
- 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 MIRNA and UNIDO. Collected data will be distributed through the national energy information system.

6. Coordination and Reporting

Project coordination and communication

The contractor will report to the UNIDO Project Manager and his team in Headquarters (Vienna) and the National Project Coordinator and his team at MIRN/DGRNE and the NDA at the Ministry of Planning, Finance and Blue Economy (MPFEA). All draft and final deliverables are subject to approval by UNIDO and MIRN/DGRNE/NDA. The contractor will coordinate on a day-to-day basis closely with the local UNIDO team at MIRN. It is the overall responsibility of the contractor to collect reliable quality data through its local team. The main communication language will be Portuguese. The assignment requires close cooperation and coordination with international partners, particularly UNDP, AfDB and the WBG. The ongoing development of the STP decarbonisation plan supported by the WBG is of particular importance in this context.

7. Application Procedure

Bidders are requested to submit their proposals by registering on the UNIDO e-procurement portal (<https://procurement.unido.org/>). In case of difficulties, please contact the UNIDO Help Desk at procurement@unido.org.

8. Qualification Requirements and Technical Evaluation Criteria

Please refer to Appendix 2 “Qualification Requirements and Evaluation Criteria” of the Bidding Documents for the full list of technical requirements.

9. Commercial Evaluation Criteria

The financial proposal in US Dollars (USD) shall be comprehensive comprising all costs (including a detailed work-time-expert-diagram indicating daily rates for individual team members according to their level of expertise). Offers without clearly stating the all-inclusive price will be rejected. UNIDO is exempt from all direct taxes, customs duties and charges of a similar nature. Proposals must be exclusive of VAT and other applicable taxes.

Please refer to Appendix 2 “Qualification Requirements and Evaluation Criteria” of the Bidding Documents for the full list of commercial requirements.

The commercial proposal must follow the instructions provided in Appendix 3 “Preparation of Financial Proposal” of the Bidding Documents.

Further information

- GCF-UNIDO Concept Note: <https://open.unido.org/projects/ST/projects/200158>
- GEF-UNIDO CEO Endorsement Document: <https://open.unido.org/projects/ST/projects/150124>
- Project website of DGRNE: <https://dgrne.org>
- NREAP, <https://www.gn-sec.net/content/national-renewable-energy-action-plan-sao-tome-e-principe>
- NEEAP, <https://www.gn-sec.net/content/national-energy-efficiency-action-plan-sao-tome-e-principe>
- Various project deliverables: <https://www.gn-sec.net/search/node?keys=sao+tome>
- STP Green Energy Acceleration Plan (GEAP), <https://dgrne.org/sites/default/files/2024-05/ST%20GEAP%20Final%20Report%20pt.pdf>
- STP Renewable Energy and Energy Efficiency Status Report [UNIDO- ALER](#)

Note to suppliers: A **circular economy** is an economic system that tackles global environmental challenges like climate change, biodiversity loss, waste, and pollution. It is a framework of four principles, driven by design: eliminate waste and pollution, keep products and materials in use, regenerate natural ecosystems and use renewable energy.

Bidders are encouraged to display the products' circularity and sustainability compliance with the Economic, Social and Governance principles under the UN Compact (<https://www.unglobalcompact.org/take-action/leadership/integrate-sustainability/roadmap/supply-chain>).

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