Terms of Reference (TOR)

Development of regional quality infrastructure frameworks for solar photovoltaics products and services in the East African Community and the Pacific Community

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Project Title: Structuring of an International Network of Solar Technology and Application Resource Centres (UNIDO Project ID: 190370)

1. INTRODUCTION

Quality infrastructure (QI) builds the credibility necessary for the creation of healthy, efficient and rapidly growing solar technology markets and ensures that expectations from investors and end-users for technology performance, durability and safety are met. Product and service quality standards are an important prerequisite for the long-term sustainability of solar markets and investments, as well as trust of consumers, suppliers and financiers. QI is also a key requirement for an inclusive energy transition, which creates local solar jobs, income and empowers domestic companies to participate in global or regional value chains of solar manufacturing and servicing.

Globally, more than one hundred international standards relevant for renewable energy technologies have been published by the International Electrotechnical Commission (IEC) and the International Organisation for Standardisation (ISO). A significant part are dedicated to standards for PV technologies. These standards cover every aspect of PV energy systems, from solar cells converting solar radiation into electricity, to the manufacturing of solar panels, to aggregating and operating large-scale PV systems.[1] These core standards are complemented by regional or national standards, which address specific conditions or requirements linked to local regulations.

In the growing markets of developing countries, assurance of product quality is crucial for all components and throughout the value chain of solar photovoltaic (PV). However, in many countries, quality control of imported off-grid, distributed or utility-scale solar products is lacking and the market is exposed to low-quality imports. Maintaining quality controls for solar photovoltaic components, is further complicated by the large number of component providers active on the global market.

Regarding the manufacturing of components the situation differs per region and technology. For example, in Sub Sahara Africa and Pacific islands, there are only a small number or no manufacturers. About 95% of PV modules and inverters are imported in these regions. Particular challenges in LDCs and SIDS arise also due to the lack of qualification, know-how and experience regarding quality installations. A study by TÜV Rheinland identified that, throughout the world, installation faults were the cause of more than 50% of serious defects in PV plants. Incorrect installation, often due to minor errors such as loose screws or incorrectly inserted connectors, can thus have devastating effects on plant performance and financial returns.

[1] https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2013/International_Standardisation_-in_the_Field_of_Renewable_Energy.pdf

A national QI framework for solar PV comprises institutions in charge of metrology, standardization, accreditation, conformity assessment and market surveillance, as well as the related policy, services and legal and regulatory frameworks. However, particularly in LDCs and SIDS, the solar mechanisms, processes and standards are often not well established, fragmented or hardly implemented.

Moreover, there is no equal progress and harmonisation between countries remains weak. This hinders the uptake of regional trade and value chains for sustainable energy products and services, including within the envisaged African Continental Free Trade Area (AfCFTA). There is need to connect these regions to international best practice of solar QI. However, currently there is only very limited international support for the creation of renewable energy QI systems in developing countries.

2. OBJECTIVE OF THE STAR C PROJECT

To address these constraints the United Nations Industrial Development Organization (UNIDO) and the International Solar Alliance (ISA), with funding of the Government of France, are implementing the project the project "|Structuring of an International Network of Solar Technology and Application Resource Centres", the STAR C project. The overall objective it to create a strong network of institutional capacities within ISA Member States to enhance quality infrastructure (QI) for the uptake of solar energy product and service markets, particularly in LDCs and SIDS.

The first phase of the STAR C project will focus on the Economic Community of West African States (ECOWAS), the East African Community (EAC) and the Pacific Community (SPC)/ Pacific Island Forum (PIF). To have more impact and to create economies of scale, the STAR C has adopted a regional approach, which aims at cross-border harmonisation of solar product, service and qualification standards, shared resources and joint implementation on national level.

Past QI interventions of UNIDO have proven the added value and benefit of regional approaches. In this context, UNIDO has supported several economic communities, including ECOWAS, EAC and SPC, in the establishment of QI policies and regional energy centres under the Global Network of Regional Sustainable Energy Centres (GN-SEC) program. The STAR C is part of the south-south and triangular activities of the centres under the GN-SEC platform. The STAR C implementation will benefit for the established institutional infrastructure and lessons learned of these interventions.

The STAR C project builds a strong partnership with the GN-SEC centres and regional QI infrastructure bodies and their national focal institutions (e.g. energy ministries and national standardisation bodies). ECREEE in Cape Verde, EACREEE[2] in Uganda and PCREEE in Tonga are already involved to some extend in regional standardisation processes and facilitate regional adoption and convening of key stakeholders (e.g. ministries, standardisation bodies, training and testing institutes) within the respective region.

The focus of this assignment however is on two of the three regions (EAC and SPC) to provide technical assistance on strengthening quality infrastructure (QI) frameworks. The targeted regions have already progress regarding sustainable energy standardisation on national and/or regional level.[3] As an outcome, the establishment of equivalent and trusted QI capabilities will help to create a level playing field for solar energy businesses in the regions to compete. Regional cooperation may also agree to share the costs involved in establishing QI institutions by developing regional bodies with mandates related to standardization or accreditation. There can

[2] For example, various solar quality standard schemes in Kenya
[3] For example, the ROGEP project regarding stand-alone applications or the regional qualification and certification schemes for solar PV installers

also be arrangements for the sharing of testing and certification services. Such initiatives can assist countries to cost effectively and sustainably address their needs related to standardization, metrology, accreditation and other QI capabilities.

3. SPECIFIC OBJECTIVE OF THE ASSIGNMENT

In this context, UNIDO and ISA are seeking international advisory support for the development of regional QI frameworks and management systems for solar photovoltaics products and services in EAC and SPC[4]. The assignment is complementary to another one, which focuses on the improvement of regional solar qualification frameworks and standards for solar thermal. A competitive tender is being launched simultaneously. Interested bidders can participate in both procurements.

The two concerned regions share significant solar potential and high interest in utility-scale, off-grid and distributed renewable energy systems, including stand-alone, and mini-grids applications. They are also strengthening efforts for local sustainable energy entrepreneurship and innovation. The regions are highly interested in improving QI frameworks for renewable energy and energy efficiency.

Solar PV in SPC and EAC

The Pacific Island Region published technical guidelines for various renewable energy technologies components including PV:

- Regional guidelines and standards for solar PV design and installation in the PICTs[5],
- System Installation Guidelines for the Pacific Islands (Grid-Connected PV System)[6] and
- Harmonized Technical Guidelines for PV Systems in the Pacific Islands[7].

Although the existence of these regional standards, the Pacific Island Region is currently referencing the international or Australia-New Zealand standards.[8] The Pacific Islands still have to implement these regional guidelines that would require consultations at a national level to ensure acceptance, suitability, and sustainability before implementation.

In East African Countries (EAC), ambitious initiatives have been led to the rapid integration and diffusion of renewable energies technologies, particularly off – grid solar photovoltaic applications. In countries such as Kenya, Uganda, Tanzania, Ethiopia, Rwanda, strategies for using solar energy have been put in place. Similarly, tax incentives aim to strongly stimulate the promotion of solar technology.

The most frequent uses in these countries are solar home systems (SHS), pico–scale solar applications associated with the telecommunications sector, solar systems for households, schools, public lighting, solar pumping of water intended for irrigation in the agricultural environment, solar applications in the health sector (conservation of vaccines, portable solar cases for mobile and medical communication in areas without reliable electricity, solar power systems for medical and surgical lighting in off – grid health centres), etc..

[4] For example, the adoption of regional standards for solar PV installations and regional training schemes
[5] SEAPI April 2014
[6] PCREEE
[7] IRENA Workshop 2013
[8] https://www.ppa.org.fj/publications-2/, published by the Sustainable Energy Industry Association of the Pacific Islands (SEIAPI) and the Pacific Power Association (PPA)

However, in the EAC zone, there are difficulties in recruiting qualified personal with the technical skills to install, maintain and repair photovoltaic solar installations. Business skills remain limited. As a result, customers lack accurate information to properly use the systems, or on basic maintenance tasks. On the other hand, the poor quality of products, the non-compliance with installation standards contribute to weakening the reputation of photovoltaic solar technology, and reduce user confidence. At the same time, this induces a failure to materialize the promised economic benefits.

On a continental level, the African Electrotechnical Standardization Commission (AESC) has started to work with the GN-SECs on regional standards. Regionally, there has been multiple progress and advancement of solar technology in the EAC. Multiple players in EAC always lay emphasis on training, certification and qualification for solar. Nonetheless, only two countries – Kenya and Tanzania have conducted market assessments for standards on solar products and services. With the region's growing deployment of solar products, it is very important that a well-structured approach and technical standards for both on-grid and off-grid connection should be communicated clearly and transparently to generators and enforced by system operators to avoid synchronization and system balancing issues in the future.

It is then necessary to:

- Accelerate the development of human capital through capacity building in terms of skills related to solar technology, to support its promotion;
- Effectively implement renewable energies policy;
- Encourage through concrete measures the use of certified quality components;
- Inform / raise awareness about photovoltaic solar technology, its advantages, its uses and installation standards;
- Improve the links between research in academia on solar technology and private sector;
- Have a harmonized sub – regional policy and standards in renewable energies and effective in all EAC and SPC member countries.

Moreover, the International Renewable Energy Agency (IRENA)[9] has identified several benefits of a functioning quality infrastructure for policy makers, manufacturers, professionals and end users. For policy makers, quality infrastructure enables the detection of low-quality products, which allows growing markets to be protected and strengthened and economic growth to be stimulated. It helps provide assurance that the renewable energy installations will perform according to expectations, thus supporting the financial viability of the technologies and increasing the return on investment, including that of public incentives for renewable energies. For manufacturers, quality infrastructure can open new markets if locally provided quality infrastructure services are internationally recognized and prove the quality of local products. Through testing and certification, as well as through the implementation of a quality management system in accordance with international standards, products and manufacturing quality can be improved.

The present assignment will be the first building block for a long-term regional solar QI process, to be implemented in partnership with the regional economic communities (RECs) within their respective QI policies and processes. The assignment will provide detailed recommendations regarding priority IEC/ISO PV standards to be included in the regional framework. It will also include the development of new standards for solar PV products or services in agreement with the scope regions of the assignment. If feasible, relevant IEC/ISO standards will be already incorporated in an adapted manner. Such standards can remain

[9] International Renewable Energy Agency (IRENA) (2015a) Africa 2030: Roadmap for a Renewable Energy Future

voluntary, or become obligatory if there are included in regulation, legislation, procurement and legal contracts.

The proposed approach in the framework shall consider the degree of solar PV market maturity in the respective region. It would be effective to adopt a minimum set of requirements, based on available international standards, thus allowing time to establish efficient import controls, installation guidelines, lists of accepted equipment, certification and testing in future stages, apart from including the development of a new harmonised standard for the regions. The assignment would guide the regional stakeholder to participation in international standard committees to contribute to the drafting of the new standards, beyond the one requested within these TORs. The development of national or regional testing laboratories are important during the commissioning phase, as well as on system inspection to ensure that procedures comply with the standards.

The regional solar PV QI and management frameworks will be subject to the approval of the respective economic communities and quality schemes and committees.[10] These committees comprise public and private sector key stakeholders and groups. The contractor will assist in identifying relevant private sector and industry experts to take part in the technical committee on solar PV. It is intended to invite also international partners or programs to the committee (e.g. IRENA, IEA).

The assignment connects to the previous QI work of UNIDO (e.g. EAC), the GN-SECs and other partners (e.g. Pacific Quality Infrastructure Initiative of PIF and Australia)[11] in the respective regions.[12] It also connects to the UNIDO work on regional minimum energy performance standards for electric appliances in the EAC, and SADC,[13] as well as global small hydropower standards. It is envisaged to add other renewable energy standards into the regional frameworks later on.

The contractor can base its work on a previous consultancy assignment with very limited scope regarding the development of a "regional model qualification and certification framework on solar energy in various GN-SEC regions", which has been launched during the preparatory phase of the STAR C project. The assignment included also a raw and fragmented baseline assessment of ongoing activities in the two target regions.

Once the regional frameworks are established, UNIDO and ISA will facilitate the implementation in selected pilot countries (Senegal, Papua New Guinea and Bhutan), including Burkina Faso and Tonga. It is envisaged to extend the frameworks to other GN-SEC regions during the 2nd phase of the STAR C project.

4. THE SCOPE OF THE PROPOSED CONTRACTED SERVICES, DELIVERABLES

Specifically, the scope of the assignment will include the following:

1. The contractor will undertake an **assessment of solar QI frameworks and management systems in the two regions**. This work will be based on the well-established QI methodology on an international level. The assignment includes the evaluation of existing QI legislation, standards, capacities and needs on national,

[10] http://waqsp.org/en/node/579 and https://eabc-online.com/wp-content/uploads/2020/08/STUDY_ON_HARMONIZED_EA_STANDARDS_IMPACT_ASSESSMENT.pdf
[11] https://unctad.org/system/files/non-official-document/DITC_TAB_PNG_Workshop_2022_Pacific_Quality_Infrastructure_Project_en.pdf
[12] https://wacomp.projects.ecowas.int/ and https://open.unido.org/api/documents/5021807/download/WAQSP%20Description%20of%20the%20Action%20Phase%202.pdf
[13] https://www.eacreee.org/project/energy-efficient-lighting-and-appliances-eela-project-southern-and-eastern-africa

regional and in the case of Africa also continental level. The analysis includes a conformity check of existing standards with established international IEC/ISO ones[14] and best practices from other regions (e.g. EU, Mediterranean region). It provides key recommendations for the improvement of the existing regional framework by considering the individual maturity of the solar market and climate conditions (e.g. tropical, close to the sea), as well as traditional linkages to international QI practice (e.g. Pacific to Australia).

2. Based on the findings and in line with international QI practice, the contractor will develop **two documents on solar QI framework and management systems**, which will further guide the work of the three economic communities EAC and SPC/PIF over the next years. The framework will include concrete recommendations for actions, improvement of capacities and processes, as well as PV standards suitable to be adopted on regional level for further implementation on national level. Moreover, based on the capacity analysis it will make recommendations for solar PV testing and certification services on regional level. The frameworks will include clear roadmaps for the regional solar QI processes, including governance, and enforcement on national level. In line with UNIDO policies, cross-cutting areas such as gender, digitalisation and climate change adaption will be considered during the design of the quality frameworks. All documents are subject to review and approval by the respective RECs and QI committees.
3. As part of the QI framework and management systems, the contractor will propose the **design and rules of procedures of the relevant regional technical committees**, which will be responsible for taking the work further. The contractor will provide technical advices and insights into international best practice. The organisation and convening of the committees by online or in person means, including all costs, will lie in the responsibility of UNIDO, the GN-SECs and RECs.
4. The assignment also incorporates **the development of new harmonized standards on solar PV products** (panels, inverters, electronic components) **or services** (installation, mounting, commissioning etc.), considering previous findings and key priorities of the regions. The elaboration of the standard shall consider experiences applied at regional or international level. Testing standards and procedures shall be also integrated within the new standard. It shall include at least one standard on components (e.g. IEC 61215; IEC 61646) and/or services (e.g. IEC 62257) for each region if priorities differ between regions; or two harmonized standards if priorities are found the same for both regions.
5. Finally, the contractor will provide **a training on solar PV QI frameworks and key principles** to key stakeholders of the regional technical committees in all two regions by online means (or physically if feasible). UNIDO will be able to facilitate the online platform as required.

The direct beneficiaries of the assignment will be the public and private key stakeholders involved in QI activities on regional and national level. The final beneficiaries are key stakeholders of the energy and power sector, including consumers, suppliers, ministries, rural electrification agencies, regulators and financiers, which will benefit from the increased accessibility of reliable and affordable solar energy products and services.

The assignment has a duration of 12 months after effectiveness of the contract. Since the assignment builds strongly on existing QI processes in the respective regions, the contractor needs to demonstrate flexibility regarding the provision of services. There might be longer breaks due to multi-country review processes of documents or rescheduling of meetings. The detailed scope of work is described in the table below:

[14] https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2017/Sep/IRENA_Solar_PV_Markets_Report_2017.pdf and https://solarthermalworld.org/wp-content/uploads/2016/01/irena_quality_infrastructure_swh_2015.pdf and https://solarthermalworld.org/wp-content/uploads/2016/01/estif_standardisation_2012.pdf

Table 1: Tasks, Deliverables and Payment Schedule

Tasks/Activities	Deliverables	Time schedule	Location	Tentative Payment Schedule
1. Online inception meetings and work plan validation The contractor will provide an inception report, incl. detailed work-time diagram, applied methodology, list of key literature, stakeholders, schedule of consultations, indicative tables of content for the assessment report and regional frameworks. The inception report and commencement of the assignment requires approval by UNIDO and ISA. At least two online inception meetings will be required, which will include also the participation of the concerned GN-SEC centers.	***Deliverables:*** Inception report incl. detailed work-time diagram, applied methodology, list of key literature, stakeholders, schedule of stakeholder consultations, indicative tables of content for assessment reports and regional frameworks in English;	At one month of the contract (5 working days)	Virtual	20% upon approval of inception report/work plan
2. Baseline assessment on existing solar QI frameworks and management systems in EAC and SPC: The contractor is expected to: a. Assess the existing solar QI frameworks and management systems in EAC and SPC by using the well-established international QI framework and methodologies; assess existing regulations, standards, actors, capacities on national, regional and in the case of Africa continental level; assess the compliance with existing IEC/ISO standards and identify gaps; the assessment will provide recommendations for the potential design of an effective solar QI framework based on best practice. b. The work requires extensive review of QI publications and technical documents of global, regional and national standard bodies and key stakeholders of the energy sector. However, the availability of solar QI documents in GN-SEC regions will be very limited and difficult to access. The desk review requires research on international ISO/IEC solar PV standards and QI documents. An online survey and interviews with key QI player in the GN-SEC regions are envisaged. The latter will be facilitated by UNIDO, ISA and the GN-SEC centers, and mainly by the STAR C coordinators. c. The analysis includes a conformity check of local practice with established international IEC/ISO solar product and service standards and best practice from	***Deliverables:*** ▪ Designed online survey with key solar PV QI questions. ▪ Analytical report of max. 40 A4 pages, excl. annexes. This document will be provided by the contractor fully edited, designed (incl. graphs) and ready to be published in English. An executive summary shall be provided in English. The documents are subject to several rounds of quality reviews and feedback loops, which might take some times.	At four months of the contract (20 working days)	Home based and international travel as required	30% upon approval of the deliverable upon approval of the provided assessment report

other regions (e.g. EU, Mediterranean region). Moreover, it will provide concrete suggestions for the inclusion of international standards into the regional frameworks. The assessment shall include diagrams and tables on existing IEC/ISO solar PV standards. The analysis needs to take into account the different climate and market maturity conditions for solar PV energy, as well as traditional linkages to international QI practice (e.g. Pacific to Australia). d. The assessment shall provide an overview on contacts of key players involved in the solar QI process on national, regional and in the case of Africa also continental level. It shall also highlight suitable metrological centers, universities, certification bodies, training institutes, industrial companies or large importers of solar components in each region.				
3. Two (2) regional solar QI frameworks and management systems for EAC and SPC, respectively a. Based on the baseline findings and in line with international QI practice, the contractor will develop two documents on the regional solar QI frameworks and management systems, which will further guide the work of the three economic communities EAC and SPC over the next years. b. The contractor will develop concrete recommendations for solar QI actions, improvement of capacities and processes, as well as PV standards suitable to be adopted on regional level for further implementation on national level. c. In consultation with the relevant regional bodies, the contractor will draw up clear roadmaps for regional solar QI processes, including governance, and enforcement on national level. d. The contractor will make concrete recommendations for shared resources, testing and certification services on regional level. e. As an annex, the contractor will propose and outline the procedures of the relevant regional technical committees, which will be responsible for the further advancement of the work. The contractor will provide	***Deliverables:*** Two documents on regional QI frameworks and management systems for SPC and EAC, respectively, are available and validated (max. 20 A4 pages, excl. annexes / each document) One (1) annex on procedures and guidelines for the operation of regional PV committees, mainstreaming gender and youth dimensions. The documents will be provided by the contractor fully edited, designed (incl. graphs) and ready to be published in English. An executive summary shall be provided in English. The documents are subject to several rounds of quality reviews and feedback loops, which might take some times.	At seven months of the contract (20 working days)	Home based	30% upon approval of the deliverable

technical advices and insights into international best practice. f. The contractor will consider cross-cutting areas such as gender, digitalisation and climate change adaption in the design of the quality frameworks.				
4. A set of harmonized standards on solar PV a. Based on the previous analyses and consultations, identify and prioritize the development of a new harmonized standard on solar PV products or services, in line with regional energy policies and technological needs of both regions. The elaboration of the standard shall consider experiences applied at regional or international level. Testing standards and procedures shall be also integrated within the new standard. It shall include at least one standard on components (e.g. IEC 61215; IEC 61646) and/or services (e.g. IEC 62257) for each region if priorities differ between regions; or two harmonized standards if priorities are found the same for both regions.	A set of harmonized solar PV standards will be provided by the contractor fully edited designed (incl. graphs) and ready to be published in English	At nine months of the contract (25 working days)	Home based and international travel as required	30% upon approval of the deliverable
5. Two (2) regional online trainings on the regional solar QI frameworks and management systems (physical or online): a. Plan and deliver workshops on key aspects and principles of the regional solar QI frameworks and management systems; b. Introduction to solar metrology, standardization, accreditation, conformity assessment and market surveillance; c. Introduction into practical QI tools in solar PV; d. Presentation of the relevant ISO/IEC standards for solar PV and requirements for implementation; e. Introduction to the roles and actions required from involved QI players to implement the regional frameworks and management systems;	***Deliverables:*** ▪ Training concept note, provided fully edited and designed to the UNIDO in English; ▪ List of participants and certificates (it shall include gender and youth disaggregated data, at least 40% women and 30% youth participation is envisaged) ▪ One (1) training report. It shall contain gender and youth disaggregated data, including an evaluation of training satisfaction by a structural survey. To be provided in English	At twelve months of the contract (5 working days)	Home based and international travel as required	10% upon approval of the following deliverables : training concept note, trainings and validation workshop reports

6. Stakeholder consultations and participation in regional QI technical committee meetings The assignment requires extensive consultations with QI stakeholders in the two regions. It also requires the participation in online meetings and the presentation of results of the assignment to relevant committees, including the project steering committee. The assignment includes **at least one international travel** to the respective regions for data collection or execution of trainings and validation workshop. The costs for flights and per diem shall be covered by the contractor through its provided budget. In case travel is finally not possible due to COVID or not required, UNIDO and the contractor can earmark the time and resources on other activities.	***Deliverables:*** One (1) consultation and validation workshop report including media deliverables captured during the workshop, gender and youth disaggregated data, one (1) press release GNSEC, ISA and STAR C websites. Workshop and training sessions could be conducted in the same field visit or online means. One (1) Mission report including mission agenda, mission objective, and achievement list of the stakeholders met (incl. gender disaggregated data) in English	At twelve months of the contract (5 working days)	Home based and international travel as required	See above
Total		**80 w/d**		**100%**

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

All used raw files and sheets in editable form (e.g. xls). All files need to be handed over and become property UNIDO. UNIDO will receive the editable design documents of the translated documents. This will allow UNIDO to incorporate future changes. UNIDO will receive also high-resolution photographs in electronic form showcasing relevant meetings with stakeholders, energy infrastructure or project sites.

a. GENERAL TIME SCHEDULE

The activities under this contract shall be completed within a period of twelve (12) months from the effectiveness of the contract. If required, the contractor and UNIDO can agree on an extension of this period. The proposed plan for implementation of activities and deliverables:

Table 2: Deliverables Time Distribution

Deliverables	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Deliverable 1: Inception report and work plan, including annexes												
Deliverable 2: Baseline assessment on existing solar QI frameworks and management systems in EAC and PIF/SPC												

Deliverable 3: Two (2) Regional solar QI frameworks and management systems for the EAC and PIF/SPC, respectively. One (1) annex on procedures and guidelines for the operation of regional solar PV committees.												
Deliverable 4: Set of harmonized standards												
Deliverable 5: Training manual, trainings and validation workshop reports												

b. IMPLEMENTATION, COORDINATION AND REPORTING

The contractor will report to the UNIDO Project Manager (GN-SEC Coordinator) and his team in the UNIDO Headquarters (Vienna) and will closely coordinate with ISA, EAREEE, PCREEE, and the STAR C coordinators and regional QI institutions and committees as required. The assignment will include monthly meetings with the UNIDO/ISA team and the GN-SEC centres.

The contractor will be assisted by EACREEE and PCREEE in the convening of relevant meetings/workshops, dissemination of surveys and will take care of the regional quality assurance processes and approvals. The STAR C project includes the recruitment of local part-time experts in the two centres.

c. PERSONNEL IN THE FIELD

The presence of personnel in EAC and SPC is not mandatory for this assignment, but will be considered as a comparative advantage. Nevertheless, the bidders are encouraged to partner with already established local organizations.

d. LANGUAGE REQUIREMENTS

The working language for this assignment will be English. At least one team member shall be able to read French. The technical and financial offer shall be provided in English.

e. AVAILABLE BUDGET

The all-inclusive budget for this assignment is **Euro 70,000** (seventy thousand euros), incl. all taxes and travel costs.

f. EVALUATION AND QUALIFICATION CRITERIA

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

Table 3: Minimum Qualification and Technical Evaluation Criteria

MINIMUM QUALIFICATION REQUIREMENTS		VALUE	SCORE
MANDATORY			
1	Registered company, training institution or university as a legal entity with at least three (5) years of public and private advisory/consulting experience in the renewable energy sector, including on solar PV quality infrastructure issues. (Please provide a copy of the Certificate of Incorporation).	Yes	qualify
		No	does not qualify
2	Immediate availability of the contractor; ability to implement the assignment despite potential COVID-19 travel restrictions;	Yes	qualify
		No	does not qualify
3	Financial Strength of the company. Please provide the completed and signed UNIDO Financial Statement Form. **Profitability** Profit Margin Ratio or Return on Assets Ratio should be preferably positive. **Solvency** A solvency ratio should be preferably more than one (1). In case of negative profit margin ratio or solvency, UNIDO may request additional documents and/or adapt payment terms and conditions. **Turnover** The average annual turnover for the past three (3) years (or for the period of time the bidder has been in business, if it has not yet reached three (3) years) should be at least 1 time more than anticipated value of the contract.	Yes	qualify
		No	does not qualify
4	Completed and signed Statement of Confirmation.	Yes	qualify
		No	does not qualify
5	Completeness of the technical and financial offer (e.g. CVs, track-record of previous assignments/projects, legal and financial documents, all-in price including all taxes).	Yes	qualify
		No	does not
TECHNICAL EVALUATION CRITERIA		**VALUE**	**SCORE**
1	Quality of the overall technical offer and efficiency of the proposed project team set-up and execution modality; technical offers shall reflect the analytical capacity of the project team and avoid just a repetition of the text in the TOR.	good	25%
		regular	10%
		poor	0%
2	More than fifteen (15) years of accumulated work experience of the project team and quality track-record of assignments regarding solar PV technologies, characteristics, policies and regulations. The Team Leader holds at least a master's degree in a relevant academic field and demonstrates at least seven (7) years of consulting/advisory experience in the field of solar PV; The work-time diagram reflects the substantial involvement of the Team Leader.	good	25%
		regular	10%
		poor	0%
3	More than five (7) years of accumulated work experience and track-record of the project team regarding quality infrastructure (QI) issues and the development of standards. Previous experience in developing solar PV standards or management frameworks is a strong asset.	good	20%
		regular	10%
		poor	0%

4	Provided track-record of more than six (6) high-quality technical studies, assessments, publications and documents of the project team regarding solar PV. The availability of SHC standard documents is a strong asset.	good	20%
		regular	10%
		poor	0%
5	At least three (3) years of accumulated work experience of the project team regarding solar energy issues in Africa is required; the employment of local experts from EAC and/or SPC is a comparative advantage.	good	10%
		regular	5%
		poor	0%
	MAXIMUM SCORE		**100%**

In accordance with UNIDO procurement rules the technically acceptable bid with the most competitive (**all-inclusive**) price will be awarded. Only technical proposals with a quality score of 70 or more, while a minimum score for each technical evaluation criterion is no less than the respective regular point (5 or 10 depending on items), will qualify for the commercial evaluation. UNIDO reserves the right to request additional information from bidders if necessary.

g. APPLICATION PROCEDURE

Interested and qualified bidders shall submit their written proposals in 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 translation assignments);
- **Financial Proposal** in EUR including all costs and taxes; offers without clearly stating the all-in price will be rejected;
  Documents demonstrating the quality of the track-record of the team with regard to previous assignments, curricula developed, training delivered and other supporting documents.

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.

Further Information

- http://starc.gn-sec.net
- https://open.unido.org/projects/M0/projects/190370
- https://isolaralliance.org
- www.gn-sec.net
- www.eacree.org
- www.pcreee.org