

## Terms of Reference (TOR)

For provision of services related to the development of regional quality infrastructure frameworks for solar photovoltaics and solar thermal energy in ECOWAS, EAC and the Pacific Community

### UNIDO Project Title

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

Date: 18 November 2022

## 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.<sup>1</sup> International standards for Solar Heating collectors (SHC) have been mainly developed by the ISO. They define test methods for solar thermal collectors, specific components and complete systems.<sup>2</sup> 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) and solar thermal heating and cooling (SHC) systems. 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, solar thermal components and complete thermal systems 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 and most PV modules and inverters are imported. In contrast, various Sub-Saharan African countries are manufacturers of solar thermal component and quality assurance for manufacturing is important. A good example for a SIDS country is Barbados, which has a very high solar thermal penetration per capita and produces most of the systems locally.

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

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<sup>1</sup> [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2013/International\\_Standardisation\\_-\\_in\\_the\\_Field\\_of\\_Renewable\\_Energy.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2013/International_Standardisation_-_in_the_Field_of_Renewable_Energy.pdf)

<sup>2</sup> [ISO - ISO/TC 180/SC 4 - Systems - Thermal performance, reliability and durability](#)

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. Also the installation of SHC systems requires solid knowledge and can result in complete failure of the system if carried out incorrectly. A number of countries had negative experiences with solar thermal water heaters. Therefore, there is need to invest in reliable and specialised qualification and certification schemes targeting various enablers of the solar value chains, incusing consumers.

A national QI framework for solar PV and SHC 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 “Structuring of an International Network of Solar Technology and Application Resource Centres”. 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](#)<sup>3</sup> in Uganda and [PCREEE](#) in Tonga are already involved to some extent 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.

All three regions have already achieved some progress regarding sustainable energy standardisation on national and/or regional level.<sup>4</sup> For example, in the Pacific island region there exist already published technical guidelines for various renewable energy technologies, including PV and solar

<sup>3</sup> For example, various solar quality standard schemes in Kenya

<sup>4</sup> For example, the ROGEP project regarding stand-alone applications or the regional qualification and certification schemes for solar PV installers

thermal, referring to international or Australian standards.<sup>5</sup> Moreover, on a continental level, the African Electrotechnical Standardization Commission (AESC) has started to work with the GN-SECs on regional standards.

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 cooperations 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 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 energy products and services in ECOWAS, EAC and Pacific Community (SPC)<sup>6</sup>/Pacific Island Forum (PIF). The assignment is complementary to another one, which focuses on the improvement of regional solar qualification frameworks and standards in the same regions. A competitive tender is being launched simultaneously. Interested bidders can participate in both procurements.

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

The following 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. Due to the limited financial scope, the assignment will not include the development of new standards but will provide detailed recommendations regarding priority IEC/ISA PV and SHC standards to be included in the regional framework. If feasible, relevant IEC/ISO standards will be already incorporated in an adapted manner. Such standards can remain 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 market maturity in the respective region. Rather than to create new standards, it may be more 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. Participation in international standard committees is recommended to contribute to the drafting of new standards. The development of national or regional testing laboratories are important during the commissioning phase, as well as on system inspection to ensure that procedures conform with the standards.

The regional solar energy QI and management frameworks will be subject to the approval of the respective economic communities and quality schemes and committees.<sup>7</sup> 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 energy. It is intended to invite also international partners or programs to the committee (e.g. IRENA, IEA SHC).

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<sup>5</sup> <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)

<sup>6</sup> For example, the adoption of regional standards for solar PV installations and regional training schemes

<sup>7</sup> <http://waqsp.org/en/node/579> and [https://eabc-online.com/wp-content/uploads/2020/08/STUDY\\_ON\\_HARMONIZED\\_EA\\_STANDARDS\\_IMPACT\\_ASSESSMENT.pdf](https://eabc-online.com/wp-content/uploads/2020/08/STUDY_ON_HARMONIZED_EA_STANDARDS_IMPACT_ASSESSMENT.pdf)

The assignment connects to the previous QI work of UNIDO (e.g. ECOWAS, EAC), the GN-SECs<sup>8</sup> and other partners (e.g. Pacific Quality Infrastructure Initiative of PIF and Australia)<sup>9</sup> in the respective regions.<sup>10</sup> It also connects to the UNIDO work on regional minimum energy performance standards for electric appliances in the EAC, SADC and ECOWAS,<sup>11</sup> as well as global small hydro power 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 very “rough” and “fragmented” baseline assessment of ongoing activities in the three target regions. The assignment is currently in its final stages.

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 2<sup>nd</sup> 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 all three regions. This work will be based on the well-established QI methodology on international level. The assignment includes the evaluation of existing QI legislation, standards, capacities and needs on national, 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<sup>12</sup> and best practice 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 three documents on solar QI framework and management systems, which will further guide the work of the three economic communities ECOWAS, 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/SHC 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 shared 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 adaptation will be considered during the design of the quality frameworks. All documents are subject to the review and approval by the respective RECs and QI committees.

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<sup>8</sup> E.g. ECOWAS ROGEP activities on regional standards for solar stand-alone equipment and energy efficiency standards for electric appliances and cook-stoves

<sup>9</sup> [https://unctad.org/system/files/non-official-document/DITC\\_TAB\\_PNG\\_Workshop\\_2022\\_Pacific\\_Quality\\_Infrastructure\\_Project\\_en.pdf](https://unctad.org/system/files/non-official-document/DITC_TAB_PNG_Workshop_2022_Pacific_Quality_Infrastructure_Project_en.pdf)

<sup>10</sup> <https://wacomp.projects.ecowas.int/> and

<https://open.unido.org/api/documents/5021807/download/WAOSP%20Description%20of%20the%20Action%20Phase%202.pdf>

<sup>11</sup> <https://www.eacreee.org/project/energy-efficient-lighting-and-appliances-eela-project-southern-and-eastern-africa>

<sup>12</sup> [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2017/Sep/IRENA\\_Solar\\_PV\\_Markets\\_Report\\_2017.pdf](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](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](https://solarthermalworld.org/wp-content/uploads/2016/01/estif_standardisation_2012.pdf)

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. Finally, the contractor will provide a training on solar QI frameworks and key principles to key stakeholders of the regional technical committees in all three regions by online means (or physical 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 twelve (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:

**Table 1: Tasks, Deliverables and Payment Schedule**

Tasks/Activities	Deliverables	Tentative Working Days	Location	Tentative Payment Schedule
<p><b>1. Online inception meetings and work plan validation</b></p> <p>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.</p>	<p><i>Deliverables:</i></p> <p>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; French is required for ECOWAS reports.</p>	5	Virtual	20% upon approval of inception report/work plan
<p><b>2. Assessment report on existing solar QI frameworks and management systems in ECOWAS, EAC and SPC:</b></p> <p>The contractor is expected to:</p> <ol style="list-style-type: none"> <li>a. Assess the existing solar QI frameworks and management systems in ECOWAS, EAC and SPC by using the well-established international QI</li> </ol>	<p><i>Deliverables:</i></p> <ul style="list-style-type: none"> <li>▪ Designed online survey with key solar QI questions.</li> </ul>	30	Home based and international travel as required	40% upon approval of the provided assessment report



<p>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.</p> <p>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 and SHC 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.</p> <p>c. The analysis includes a conformity check of local practice with established international IEC/ISO solar product and service standards and best practice from 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/ISAC solar standards. The analysis needs to take into account the different climate and market maturity conditions for solar energy, as well as well as traditional linkages to international QI practice (e.g. Pacific to Australia).</p> <p>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, training institutes, industrial companies or large importers of solar components in each region;</p>	<ul style="list-style-type: none"> <li>▪ Analytical report of max. 60 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 and French. The documents are subject to several rounds of quality reviews and feedback loops, which might take some times.</li> </ul>			
<p><b>3. Three (3) regional solar QI frameworks and management systems for ECOWAS, EAC and PIF/SPC</b></p>	<p><i>Deliverables:</i></p>	<p>30</p>	<p>Home based</p>	<p>40% upon approval of the provided assessment report</p>

<p>a. Based on the baseline findings and in line with international QI practice, the contractor will develop three documents on the regional solar QI frameworks and management systems, which will further guide the work of the three economic communities ECOWAS, EAC and SPC/PIF over the next years.</p> <p>b. The contractor will develop concrete recommendations for solar QI actions, improvement of capacities and processes, as well as PV/SHC standards suitable to be adopted on regional level for further implementation on national level.</p> <p>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.</p> <p>d. The contractor will make concrete recommendations for shared resources, testing and certification services on regional level.</p> <p>e. The contractor will consider cross-cutting areas such as gender, digitalisation and climate change adaption in the design of the quality frameworks.</p>	<p>Three documents on regional QI frameworks and management systems for ECOWAS, EAC and SPC/PIF are available and validated. 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 and French. The documents are subject to several rounds of quality reviews and feedback loops, which might take some times.</p>			
<p><b>4. Three (3) regional online trainings on the regional solar QI frameworks and management systems (physical or online):</b></p> <p>a. Plan and deliver workshops on key aspects and principles of the regional solar QI frameworks and management systems;</p> <p>b. Introduction to solar metrology, standardization, accreditation, conformity assessment and market surveillance;</p> <p>c. Introduction into practical QI tools in solar PV and SHC;</p> <p>d. Presentation of the relevant ISO/IEC standards for solar PV and SHC and requirements for implementation;</p> <p>e. Introduction to the roles and actions required from involved QI players to implement the regional frameworks and management systems;</p>	<p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>▪ Training manual provided fully edited and designed to the UNIDO in English;</li> <li>▪ List of participants and certificates</li> <li>▪ Results of feedback survey undertaken after the training;</li> </ul>	<p>15</p>	<p>Home based and international travel as required</p>	

<p><b>5. Stakeholder consultations and participation in regional QI technical committee meetings</b></p> <p>The assignment requires extensive consultations with QI stakeholders in the three 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. 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.</p>	<p><i>Deliverables:</i></p> <ul style="list-style-type: none"> <li>▪ Evidence on stakeholder consultations;</li> <li>▪ Mission reports</li> </ul>	10	Home based and international travel as required	
<b>Total</b>	<b>90 w/d</b>		<b>100%</b>	

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.

## 5. 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
<b>Deliverable 1:</b> Inception Report, including annexes												
<b>Deliverable 2:</b> Assessment report on existing solar QI frameworks and management systems in ECOWAS, EAC and PIF/SPC												
<b>Deliverable 3:</b> Three (3) Regional solar QI frameworks and management systems for the EAC, ECOWAS and PIF/SPC												
<b>Deliverable 4:</b> Three (3) regional trainings on the regional solar QI frameworks and management systems (physical or online)												
<b>Deliverable 5:</b> Stakeholder consultations and participation in regional QI technical committee meetings												



## 6. 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, ECREEE, PCREEE 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 ECREEE, 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 three centres.

## 7. PERSONNEL IN THE FIELD

The presence of personnel in ECOWAS, 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.

## 8. LANGUAGE REQUIREMENTS

The working language for this assignment will be English. Fluency in French of at least one team member is mandatory. Several QI documents might be only available in French.

## 9. AVAILABLE BUDGET

The maximum all-inclusive budget for this assignment is Euro 90,000.00 (incl. all taxes and travel costs).

## 10. QUALIFICATION REQUIREMENTS AND EVALUATION CRITERIA

Received proposals 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
<b>MANDATORY</b>			
1	Registered company, training institution or university as a legal entity with at least seven (7) years of public and private advisory/consulting experience on key aspects of quality infrastructure frameworks and management systems, including in the renewable energy sector. (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 <u>UNIDO Financial Statement Form</u> .  <b>Profitability</b> Profit Margin Ratio or Return on Assets Ratio should be preferably positive.  <b>Solvency</b> A solvency ratio should be preferably more than one (1).	Yes	qualify
		No	does not qualify

	In case of negative profit margin ratio or solvency, UNIDO may request additional documents and/or adapt payment terms and conditions.		
	<b>Turnover</b> 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.		
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
<b>TECHNICAL EVALUATION CRITERIA</b>		<b>VALUE</b>	<b>SCORE</b>
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	20%
		regular	10%
		poor	0%
2	More than fifteen (15) years of accumulated work experience of the project team and quality track-record of assignments and work experience on QI and solar energy technology issues, including in Sub Sahara Africa; at least one team member needs to have working knowledge in French.  The Team Leader holds at least a master's degree in a relevant academic field and demonstrates at least ten (10) years of consulting/advisory experience in the field of quality infrastructure (QI) and/or renewable energy and energy efficiency; the Team Leader needs to demonstrate relevant experience with similar complex assignments in developing countries. The work-time diagram reflects the substantial involvement of the Team Leader.	good	20%
		regular	10%
		poor	0%
3	Full proficiency (C2+) of the team in English; at least one team member needs to be proficient (C1 level minimum) in French.	good	10%
		regular	5%
		poor	0%
4	At least five (5) years of work experience and provided track-record of the project team on issues regarding quality infrastructure (QI) policies, management systems, processes and standards.	good	15%
		regular	5%
		poor	0%
5	A minimum of three (3) years of work experience and track-record of the team regarding solar PV and SHC technologies, policies, regulation and standards.	good	10%
		regular	5%
		poor	0%
6	The bidder offers three (3) samples of developed quality publications, studies and technical reports of the project team on QI and renewable energy issues.	good	10%
		regular	5%
		poor	0%
7	A minimum of five (5) years' experience on QI and solar energy issues in Sub Sahara Africa and/or Pacific islands; the employment of local experts from/in both regions is a comparative advantage.	good	15%
		regular	5%
		poor	0%
<b>MAXIMUM SCORE</b>			<b>100%</b>

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

## 11. 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](mailto: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](http://www.gn-sec.net)
- [www.ecreee.org](http://www.ecreee.org)
- [www.eacreee.org](http://www.eacreee.org)
- [www.pcreee.org](http://www.pcreee.org)