

**International Solar Alliance (ISA) Expression of interest
for Empanelment of Global Firms / Companies for
Assessment of Solar Mini Grids in identified member countries of
ISA (Asia Pacific Region)**

Date: 26 May 2022

ISA invites interested companies to apply on the following:

Summary of proposal:

1.0) BACKGROUND:

ISA member countries are endowed with vast potential of solar energy. The respective Governments are making efforts to tap Solar Energy resources to improve the availability of power in the member countries by promoting solar power projects. Although sustained efforts have been made in the past, a large number of rural households are still deprived of electricity. Such households can be electrified through mini-grid from locally available renewable energy sources by decentralized power generation. Furthermore, many of the member countries are already having Mini Grids networks which are mostly powered by diesel generators. The ideal situation in such countries is to have a replacement (partly or fully) of DG sets with Solar PV systems, hence Hybrid Mini Grids are most suited to help those countries reduce carbon emission and meet their Nationally Determined Contributions (NDC) commitments.

ISA Programme No. 03 viz., “Scaling Solar Mini Grids”, was launched on 24th May, 2017 during the 52nd Meeting of the African Development Bank group at Gandhinagar, Gujarat, India. The Programme was launched with an objective to cater to the energy needs of ISA member states in identified areas with unreliable or no grid(s), and in island member states having abundant potential to tap solar energy including replacing existing DG sets with solar systems

In this context, ISA is looking for a competent firm / company to help achieve the above-mentioned objectives by way of assessing the solar mini-grids potential in member countries of ISA (**Asia Pacific Region**) as brought out in detail in this document

2.0) KEY DELIVERABLES:

The selected firm is generally required to carry out the following activities while doing the assessment in member countries of ISA (Africa region), as per the requirement of ISA. The key deliverables of the firm / company shall be one or more of the following to enable the readiness of the member country for the scaling of Solar Mini Grids (SMG) projects:

- a) **Prepare Country Energy Profile and SMG Assessment Report** to understand the readiness of the country in scaling up solar mini grids programme, which includes but not limited to:

- I) Assessments of the potential sites to obtain the socio-demographic characteristics of the followings:
 - 1) Population and number of households; their energy demand and consumption pattern, details of electrical gadgets being used by them.
 - 2) Economic and productive activities practiced by the population;
 - 3) Current electrification status;
 - 4) Willingness and ability to pay of potential end-users;
 - 5) Existing governance structures in the community or area (such as community associations or rural community committees); and
 - 6) Households, businesses, and institutions demand assessment

 - II) Assess capacity & compatibility of available energy source at the site and indicate the most cost-effective source or combination of sources.

 - III) Report must include the most suitable solar mini grids location(s) based on the physical assessment. This will serve as basis for the technical design of the solar mini grid project and to prioritize the location(s).

 - IV) Based on the above aspects, estimating the most optimum size of the solar mini grids projects for the identified location(s).
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- b) Prepare Report on the Financial Ecosystem of the member country with regard to financing of solar mini grids projects. (Macroeconomic environment, Business models, Financing instruments, incentives schemes, portfolio of regional/national banks etc.)

 - c) Review the existing energy/solar policy/regulations of the member country and identify the gaps/challenges and provide the recommendations accordingly to scale the solar mini grid projects in consultation with concerned administrative ministry and associated departments/agencies of the member country.

 - d) If the member country does not have Solar Mini Grid Policy, preparation of a suitable draft of solar mini grid policy in consultation with concerned administrative ministry and associated departments/agencies.

 - e) The firm / company shall also assist in arranging training programme & workshops during country missions in member country.

 - f) The assessment report shall be accepted only upon concurrence of the member country.

 - g) Preparation of standard Project documents like model bidding document, Power Purchase Agreement, Concession Agreement etc. (wherever required).

- h) Based on the above-mentioned assessment report, preparation of bankable detailed project report of the finalized SMG site(s) in the member country. The bankable details project report shall consist of following:
- (i) Site survey details, selection of suitable space, analysis of installed electrical equipment's & connected loads, Load management.
 - (ii) Basic engineering of proposed Solar Mini Grid plant including layout, shadow analysis, technology selection, technical description & specification of all the components, Water & Auxiliary power requirements.
 - (iii) Techno-commercial study including Design Simulation & estimation of generated energy, proposed Business models with its benefits, Financial analysis covering financial viability, ROE, profitability and cash flow at levelized tariff etc.)
 - (iv) Preparation of detailed engineering drawings for the projects including but not limited to the following:
 - a. Solar array layout (to be located in completely shadow free space identified during site survey).
 - b. Single line diagram (clearly showing and differentiating existing energy flow diagram and proposed solar power generation, distribution and integration with the existing power evacuation network).
 - c. Details of cable routing and termination (including complete specifications).
 - d. Control room equipment layout and complete equipment interconnection.
 - e. A set of documents including complete specifications, warranty terms and details of traceability of all the equipment to be supplied with the power plant.
 - (v) Data regarding reduction in CO2 emissions with the proposed project.
 - (vi) Compliance of all type of statutory approvals required for the commissioning of Solar Mini Grid Plant.
 - (vii) Proposed Solar Mini Grid Plant Project Implementation schedule.
 - (viii) Proposed Solar Mini Grid Plant operation planning. (manpower planning, operation & maintenance activities, Risk Analysis)
 - (ix) Conclusion & recommendations.

Note:

1. For preparation of the above-mentioned reports, the firm / company shall closely interact and liaison with the key stakeholders like policy makers, regulators, Power generation & transmission utilities, power distribution companies etc. of the member country.
2. The firm / company shall submit the soft copy and appropriate number of translated hard copies of these reports as per the requirement of the member country.
3. The exact scope of work would be finalized by ISA as per the requirement of the member country.

Eligibility criteria

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| List of attributes: |
| Specific Requirements: |
| Should have completed survey of at least 10 villages in the Asia Pacific region and produced the feasibility reports. Such reports should have been endorsed by Funding Agencies/Governments. |
| Should have a pool of skilled technical manpower competent to conceive, design and formulate SMG projects customized to requirements of various categories of users (viz. domestic, commercial, Productive & anchor loads), operating in the actual geographical and environmental conditions of the actual sites. The project leader should have the minimum experience of 5 years in renewable energy sector. |
| General Requirements: |
| Wherever assessment has been carried out by the firm/ company, the following should have been included by the firm/company: |
| Should have experience of conducting grassroot level surveys, including energy demand, consumption pattern and demographic details of the remote rural habitats for the purpose of conceiving and formulating Solar Mini-grid (SMG) Projects |
| Should have been involved/familiar with the Mini Grids policies, Renewable Energy policies, Electrification plans, Electricity and RE Power regulations, technical standards for solar Mini Grids, grid regulations, grid codes, grid connectivity standards etc. |
| Should possess experience/ knowledge in commercial documentation (in the appropriate official languages) like Power Purchase Agreement, Concession agreements, payment security instruments, bidding documents for selection of IPPs and the relevant licencing procedures etc. |
| Should have experience / knowledge in current business models, financing mechanisms for solar Mini Grids, existing power purchase transaction models etc. |
| Should have experience/capability in coordination with various stakeholders like policy makers, regulators, Power generation & transmission utilities, power distribution companies etc. |
| Should be capable of tariff fixation in accordance with the SMG policy of the country and suggesting suitable mechanism of smooth operation of the mini-grids in the prevailing conditions |

Documents Submission details

- ✓ Company Profile.
- ✓ Registration certificate;
- ✓ Compliance Statement for Specific/General requirement as mentioned under Eligibility Clause, along with documentary evidence against each requirement.
- ✓ List and value of projects performed for the last 3 years plus client's contact details who may be contacted for further information regarding their feedback on those contracts.

- ✓ List and value of ongoing Projects with ISA (if any) and other national/multi-national organization with contact details of clients and current completion ratio of each ongoing project;
- ✓ Completed and signed CVs for the proposed key Personnel.

Empanelment period:

The time line of the empanelment period shall be 2 years from the date of award of the empanelment contract. Further any extension in time shall be mutually decided based on the requirement /work progress.

- How to submit

Proposal Submission Address- E-mail: procurement@isolaralliance.org

Format: PDF files only

File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard.

All files must be free of viruses and not corrupted.

Max. File Size per transmission: 5 MB

When to submit (*Expression of interest and statements of qualification must be delivered to the email address given above by **10 June 2022***)-

Interested Companies must provide information indicating that they are qualified to perform the services (brochure, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc...). Companies may associate to enhance their qualifications.

The EOI and accompanying documents must be received through email no **later 10 June 2022**. clearly labeled “EOI for **Empanelment of Global Firms/Companies for Assessment of Solar Mini Grids in identified member countries of ISA (Asia Pacific Region)**”.

EOI from suppliers failing to provide the request information will be disregarded. Request for Proposal and any subsequent purchase order will be issued in accordance with the rule and procedures of ISA.

This EOI does not entail any commitment on the part of ISA, either financial or otherwise. ISA reserve the right to accept or reject any or all EOI without incurring any obligation to inform the affected applicant/s of the grounds.

Interested consultants may obtain further information at the below email address.
procurement@isolaralliance.org