

## TERMS OF REFERENCE

### Consultant for Solar Project

**Publication date:** 29<sup>th</sup> Jan 2022

**Submission date:** 04<sup>th</sup> Feb 2022

**Country:** Bhutan

**Duration:** 65 Days

**Description of procurement:**

Bhutan's Department of Renewable Energy (DRE), Ministry of Economic Affairs is planning to implement its first utility-scale solar PV power plant and the country is planning to further scale up solar PV in its generation mix. The expert should deliver two main outputs: (i) support the executing agency (EA) during the bidding process until contract award of the design-build powerplant package and (ii) prepare a solar PV master development plan for a 10-year period.

**Scope of the Project:**

**OUTPUT 1:**

The expert shall work closely and assist ADB (as the EA) and DRE and other relevant agencies during the bidding process until award of contract. The expert shall also respond to any solar PV-related engineering, design, implementation matter requested from ADB.

**OUTPUT 2:**

In close coordination with the country's energy sector agencies (e.g. Department of Renewable, Druk Green Power Corporation, Bhutan Power Corporation, Bhutan Electricity Authority, Department of Hydropower and Power System and any other relevant agency) the expert will prepare a 10-year solar PV master development plan which will outline the future investments required into solar PV.

The contract is subject to performance evaluation review, conducted at midpoint or annually, whichever comes first. The review shall be based on achievement of assignment specific outputs on time and on budget. Any changes in stated outputs need to be approved by ADB. ADB reserves the right to terminate the contract (i) if outputs are not achieved on time and at quality level acceptable to ADB; (ii) services are no longer required; or (iii) for any other reasons in the interest of the project. Pre-termination of the contract is subject to 4-weeks' notice.

**Eligibility Requirement:**

The expert shall have a bachelor's or a higher degree in engineering or physics and at least 10 years' experience in design, development, and implementation of grid-connected solar PV power plants totaling at least 500MW aggregated capacity and be fluent in both spoken and written English. The expert should have previous experience in implementing intermittent generation such as solar PV, grid impact analysis, network, and synchronization analysis; knowledge of international organizations/agencies; previous work experience in projects financed by international financial institutions (IFIs). The solar PV expert shall be experienced

in detailed engineering, sizing and layout planning, assessment of transmission infrastructure, grid integration of variable renewables, technical due diligence, operation and maintenance, health and safety during construction, stakeholder engagement and preparation of workshops for capacity building of Solar PV plants. The consultant must have a license for the PVSYST platform and be experienced analyzing solar PV project designs with PVSYST. Any experience in foundation design, reviewing and analyzing geotechnical and seismic reports of solar PV panels, and design of balance of plant such operations building, fencing, drainage systems access roads would be beneficial.

Previous experience in South Asia with ADB DMCs is important. The expert will support the executing agency (EA), the Department of Renewable Energy, in answering technical queries during the bidding process of the 17 MWp Sephu Solar PV power plant in Bhutan, provide input and support the EA by reviewing the received bids, preparing bid evaluation reports as per ADB standards. And any solar-related matter which may be requested by ADB.

For more information, please email to [info@tenderingproject.es](mailto:info@tenderingproject.es)