

COMPETITIVE BIDDING OF 600MWp SOLAR PV PROJECT AT KOT ADDU / MUZAFFARGARH, PUNJAB, PAKISTAN

Nature has blessed Pakistan with enormous renewable energy potential, particularly solar, which can be commercially exploited for power generation and to help meet the energy needs of the country. Among the available alternative and renewable energy (**ARE**) resources, solar energy is the only one that is predominately available across nearly all of the country. The highest values (i.e., up to 2,400 kWh/m²) have been measured in the southern and central parts of the country, while values decrease towards the northern parts to about 1,000 – 1,200 kWh/m². Owing to recent technological advancements of commercially available solar technology and the decline in its cost over the last decade, solar energy now ranks among the cheapest form of energy globally. Responsibly exploited, solar energy can contribute to a higher proportion of the country's current energy supply mix and can help increase the share of clean, renewable indigenous power generation sources while helping to ensure the supply of inexpensive electricity.

Due to concerted efforts, the share of AREs in Pakistan has already exceeded to 6% of the power generation mix, however; ARE promises a higher proportion of the national energy supply mix and can help ensure universal and affordable access to electricity in all regions of the country. For the same reason, Government has set the target of achieving 60% share of its generation capacity through indigenous clean energy technologies (ARE & hydro) by 2030 on the basis of outputs of Indicative Generation Capacity Expansion Plan (**IGCEP**).

In order to ensure the GOP's policy objectives of energy security, affordability of electricity, environmental protection, and sustainable development, the GOP envisions to deploy Renewable Energy projects especially solar power on a fast track basis to eventually complement and/or substitute the expensive imported fossil fuels currently being used for power generation. Private Power & Infrastructure Board (**PPIB**) being the focal federal agency with one of the mandates to promote and facilitate the development and deployment of alternative and renewable energy technologies in the country has been perusing the development of renewable energy-based power generation projects on IPP mode through private sector investors. A total of 51 ARE based projects of 2,634 MW cumulative capacity are currently operational that include:

- Thirty-six (36) wind power projects of 1,835 MW.
- Seven (07) solar projects of 530 MW.
- Eight (08) bagasse based co-generation projects of 259.1 MW.

Another, three (03) solar PV projects making a cumulative capacity of 150 MW are under construction and are expected to achieve Commercial Operation Date (**COD**) by June 2023 whereas, several other ARE projects are at different stages of project development.

Apart from investments from both local and international investors, leading International Financial Institutions (**IFIs**) including but not limited to IFC, ADB, DFC/OPIC, ECO Trade Bank, CDC, CDB, ICBC have provided lending for the development of aforesaid ARE projects in Pakistan. The quantum of investment in above said projects clearly demonstrates the confidence of the investors / lenders on the robustness of the Policy and Contractual Framework pursuant to which such investments have been made.

Now, in realization of the need to reduce the impact of prevailing high prices of imported fossil fuels in the international markets resulting in high electricity tariffs and drain of precious foreign exchange, the Federal Cabinet (**GOP**) has approved the Framework Guidelines for, inter alia, “Substitution of Expensive Imported Fossil Fuels with Solar PV Energy Initiative”. Under the said Initiative, the GOP plans to develop large-scale solar PV projects of approx. 6,000 MWp for substitution of existing imported fossil fuel based thermal power plants within their technical and contractual limits through private sector on Built Own Operate and Transfer (**BOOT**) basis. The Framework Guidelines as approved by the GOP for the said Initiative are available at PPIB’s website.

The first 600 MWp solar PV project under the said Initiative is planned to be developed at Kot Addu / Muzaffargarh, Punjab, Pakistan through international competitive bidding. The project Site has been identified/finalized keeping in view the availability of existing grid infrastructure required for power evacuation, resource availability, water availability and close proximity of the Site with load centers. Further, in order to enable the bidders to prepare and finalize their proposals, the following technical studies have been carried out and made part of the RFP:

- i. Resource Assessment Study
- ii. Logistics Study
- iii. Geotechnical / Subsoil Investigation Study
- iv. Topographic Survey
- v. Hydrogeological Study
- vi. Environmental Impact Assessment (EIA) Study
- vii. Grid Interconnection Study

However, the Successful Bidder would be required to update the EIA with respect to the Project and bid specific information and shall obtain the approval (no objection certificate) from the Punjab Environmental Protection Agency before Financial Closing (FC). Further, the Successful Bidder will carry out the Grid Interconnection Studies in accordance with the Grid Code using the Project and bid specific information and obtain the necessary approval of the same from NTDC in accordance with the terms of the RFP.

This round of bidding is an open competition among bidders, both local and foreign, to submit their best considered offers for the Project. Single stage, two-envelope bidding process shall be adopted. The contents required for each envelope and the basis for evaluation of the Bids are detailed in the Request for Proposal (RFP). The Bidder offering lowest tariff shall be declared as Successful Bidder who will be required to achieve the Financial Closing (FC) and Commercial Operations Date (COD) in accordance with the terms and conditions of the RFP and Project Agreements.

Eighty percent (80%) of the bid tariff shall be indexed for exchange rate variations (USD/ PKR) at COD and thereafter quarterly throughout the term, whereas the remaining twenty percent (20%) of the bid tariff shall be adjusted one-time at COD. In addition, the interest rate indexation shall also be provided in accordance with the terms and conditions of the RFP.

It is pertinent to mention here that the overall Contractual Framework being proposed in the RFP have been further strengthened by providing an additional layer of security in the form of payments secured by way of a Bank Debit mechanism in addition to the GOP Guarantee against payment obligations of the Purchaser.

All further detail with respect to the Project, terms of bidding including bidding schedule, Contractual Framework, Feasibility Studies etc. is provided in the RFP which can be purchased from PPIB office upon payment of US\$ 200 as registration fee and US\$ 2500 for RFP document, prior to bid submission deadline i.e., October 30, 2023. RFP document can be obtained either from PPIB office or through email upon payment of requisite fees.

Payments will also be accepted in equivalent Pakistan rupees at the prevailing market rate on the RFP purchase date; either (i) directly in PPIB Bank account(s) or; (ii) by way of a demand draft or pay order in the name of Alternative Energy Fund. The details of PPIB US Dollar and Pak Rupees Bank accounts are given below:

PPIB US Dollar Account

Title / Bank Name / Branch	Account No.
ALTERNATIVE ENERGY FUND Bank AL Habib Limited (Jinnah Avenue, Blue Area, Islamabad - 0004)	Account Type: NFCY FE-13 SAV-US\$
	0004-0419-058630-01-7
	<u>IBAN No.</u> PK79 BAML 0004 0419 0586 3001

PPIB Pak Rupee Account

Title / Bank Name / Branch	Account No.
AEF-II National Bank of Pakistan (Prime Minister Secretariat, Islamabad)	17323001508066
	<u>IBAN No.</u> PK10NBPA1732003001508066