PROJECT PROGRAMME ENERGY EFFICIENCY AND RENEWABLE ENERGY PHASE IV, COMPONENT II: WINDPARK BOGDANCI - PHASE II

International Public Bidding (with Pre-qualification)

Country:	Republic of North Macedonia
Reference-No.:	BMZ-No: 2013 66 889
KfW Procurement Number:	505141
Submission Deadline:	02 March 2020 (12:00 hrs local time in the Republic of North Macedonia, sent by post or delivered to the records division of JSC Power Plants of North Macedonia, no personal registration required)
Pre-qualification:	Invitation for expression of interest
Reference:	International open tender for Procurement of Goods, Works and associated Services for the Project “Windpark Bogdanci - Phase II”, as an EPC project.
Project Executing Agency (PEA):	JSC Power Plants of North Macedonia (AD ESM), Skopje, Republic of North Macedonia
Financing:	KfW Development Bank
Project Measures:	The Project concerns the extension of the existing windpark Bogdanci I with an expected additional capacity of 13.2-15 MW. The purpose of the Project is to increase and diversify energy resources and to contribute for the generation of electricity in the Republic of North Macedonia without the emission of harmful gases, and hence the negative environmental impacts. The Project also contributes for a sustainable economic development, social development and environmental and climate protection. The tendering for the Project is expected to take place in Q2/2020. The Project activities described below will be financed from the proceeds of the Loan.

The Project is divided in two (2) tenders:

- Tender 1: Wind turbines
- Delivery and installation of 3 or 4 wind turbines
- Delivery and installation of wind turbine foundations
- Long-term service agreement and availability and power curve guarantee

- Tender 2: Balance of plant
- Internal cable network (MV network and fiber optic cables)
- Connection to the existing Bogdanci substation
- Internal roads
- Civil works for crane platforms and temporary storage areas

This prequalification applies to Tender 1

Main scope of works for Tender 1

3 or 4 wind turbines, with

- the same rated power and of the same type
- minimum wind farm capacity of 13.2 MW
- maximum wind farm capacity of 15.0 MW

Each wind turbine will be supplied with its own control system, which will, *inter alia*, include the following functions:

- generation monitoring and control
- generator synchronization with the network
- monitoring of wind turbines operation during limited operating conditions
- automatic hub rotation
- feathering
- curtailment
- noise control
- environmental control
- network monitoring
- fire protection monitoring

Wind turbines should be able to regulate the voltage and frequency in accordance with the network operator's requirements, while the monitoring software should facilitate remote control including data analysis.

The wind turbine monitoring system shall meet the following functions:

- gather relevant monitoring and control data
- process data and display them in legible format
- perform automatic monitoring based on a predefined algorithm

- ensure cost-effective, safe and reliable operation
- enable data exchange between different subsystems
- collect and store data permanently, including archiving for static analysis and experience-based planning
- permanently monitor system components' status and provide alarm and diagnostics in the event of power plant operation irregularities.

Foundations will be designed and constructed as part of Tender 1.

The crane platforms and temporary storage areas will be designed and constructed as part of Tender 2.

Requested Services:

- General project management;
- Design and engineering (necessary changes to design for building permit, the execution design and the as-built design);
- Procurement of necessary equipment;
- Insurance and transport of equipment;
- Factory testing of equipment;
- Equipment testing after delivery;
- Erection and installation of the procured equipment;
- Trial operation of all individual power plant systems to determine their joint functioning as part of a whole;
- Site infrastructure;
- Installation and commissioning;
- Guarantee tests, including power curve validation;
- Support and contractual obligations related to defects removal within the guarantee period;
- Training, documentation;
- Operating and maintenance manuals;
- Providing any necessary standard and application programs (software);
- Design, procurement, civil works and installation of the foundations
- Any activities/actions not listed and which must be carried out to start the trial operation of the power plant, obtain the use permit and complete the guarantee period.

The prequalification for procurement will be guided by the latest version (January 2019) of the "Guidelines for the Procurement of Consulting Services, Works, Plant, Goods, and Non-Consulting Services in Financial Cooperation with Partner Countries" (please refer to the website of KfW Development Bank:https://www.kfw-entwicklungsbank.de/PDF/Download-Center/PDF-Dokumente-Richtlinien/Vergaberichtlinien-2019-Englisch-Internet_2.pdf).

Program language for all communication purposes, such as reports, documents, drawings, lists, schedules etc., and also the necessary personal contact is agreed to be in written, respectively spoken English. For communication with local

participants and official bodies in the Project, the Macedonian language shall be used, and the Contractor shall provide an interpreter.

Further detailed information regarding the Project and the scope of works will be provided at the request of the Contractor by sending an e-mail to the responsible person of the PEA. Without such information, it is possible that the application will not be prepared in accordance with the requirements.

For any request to or correspondence with the PEA, a carbon copy (Cc) shall be sent to the responsible person from KfW and the Consultant.

Project Executing Agency (PEA):

JSC Power Plants of North Macedonia (AD ESM)
Mr. Vlatko Pavleski
Head of Office for Hydro Power and Renewables
Department for Development and Investments
11 Oktomvri 9
1000 Skopje
Republic of North Macedonia

e-mail: vlatko.pavleski@elem.com.mk

Financing Institution:

KfW
Mr. Rainer Sünnen
Palmengartenstrasse 5 – 9
60325 Frankfurt am Main
Germany

e-mail: rainer.suennen@kfw.de

Consultant:

Fichtner GmbH &Co KG
Mrs. Sonja Koch
Sarweystr. 3
70191 Stuttgart
Germany

e-mail: sonja.koch@fichtner.de

Pre-qualification Documents:

The request for pre-qualification shall be prepared in English language. The envelope shall be marked as:

"Pre-qualification for Procurement of Goods, Works and associated Services for Project "Windpark Bogdanci - Phase II"

The main addressee is the Project Executing Agency (see the address above). Send the original signed document, two hardcopies of the document and one digital copy in one envelope.

The second addressee is the KfW (see the address above).

Send one digital copy in one envelope.

The third addressee is the Consultant (see the address above). Send one digital copy in one envelope.

It is indicated that the digital files shall be of the format docx, xlsx, pdf.