Miravci Wind Power Project. Project preparation and technical study

APPROVED IN 2018

VALUE . . . . . 150,000 EUR
COUNTRY OF OPERATIONS . . . . . North Macedonia
SECTOR OF OPERATIONS . . . . . Energy
EXPECTED RELATED INVESTMENT . . . . . 25 million EUR

BACKGROUND

In North Macedonia, significant transition gaps remain in the energy sector in terms of moving tariffs towards cost-recovery levels, strengthening the capacity of the regulator and developing renewable sources of energy. The EBRD's focus is to strengthen the capacity of the regulator and to develop renewable sources of energy through projects and policy dialogue in addition to promote further energy efficiency in the private and public sectors.

In the framework of the wind power development, the EBRD is considering providing financing to Elektrani na Makedonija AD (ELEM) for supporting the construction and operation of an up to 50 MW wind farm approximately 130 km south-east of Skopje, in the vicinity of the village of Miravci in the Gevgelija Municipality, in the south-eastern part of North Macedonia. The site is on the southern part of the gorge Demir Kapija, at an altitude between 390 m and 700 m, an area characterised by low vegetation and relatively rough terrain. Construction is envisioned in two phases: phase A for up to 14 MW is currently being discussed with the Bank; phase B for another up to 50 MW would follow in a few years. Individual turbines will be in range 3-4 MW, class of turbines II.

A new access road (approximately 4 km long) and a transmission line from the existing 110 kV transformer station at Valandovo (approximately 17 km long) will be built for the purposes of the project.

The initial energy yield estimated by ELEM on the basis of the available wind data is a nominal annual power generation of approximately 127 GWh, and an annual equivalent load factor of 2540 full-load working hours.

Two wind measurement campaigns took place 5 years ago, both with masts of 50m height, for 18 months and 36 months respectively. Raw wind data is available.

The Company owns and operates a 36 MW wind farm located on the opposite side of the gorge (Bogdanci wind farm).

OBJECTIVES

The main objective of the assignment is to review and confirm the robustness of the wind measurement data, if required, and support ELEM in the collection of additional data, produce a yield assessment report and a concept design of the plant along with basic technical specifications.

The assignment will take full account of the existing technical and environmental documentation and studies. ELEM will prepare these documents for the assignment, which will be made available for the first field trip to the site and ELEM's Headquarters.

All the major technical features of the investment project will be analysed and commented, focusing in particular, on the following main tasks:

- Initial wind resource assessment.
- Incremental wind measurement campaign and revised wind resource assessment.
- Basic project design and technical characteristics.