Wind power – North Macedonia

The first North Macedonian wind farm in Bogdanci

In a record time of 18 months, the first wind farm in North Macedonia has been built in Bogdanci, on the border to Greece. KfW Development Bank is funding the project as a contribution to the promotion of energy efficiency and renewable energies in North Macedonia. The wind farm was connected to the power grid in March 2014.

Context

The most important energy sources in North Macedonia are predominantly hydropower and coal. The energy system still dates back to the previous century, from the 70s. The infrastructure is partly in bad condition, the power supply not efficient and there are not enough funds to enable modernization and expansion in order to guarantee more efficient power generation and supply. This inhibits the country’s economic and social development.

At the moment, a third of the power required is imported. In order to guarantee a reliable long-term energy supply, North Macedonia is reliant on new energy sources. Despite its inland location, North Macedonia has large potential in the area of wind power. With average wind speeds of between 6.7 and 8.5 m/s, a series of wind park locations worth considering were identified, including the one in the proximity of the small city of Bogdanci in the south of the country.

Project approach

To increase the amount of renewable energy used for power generation in North Macedonia, a wind farm was built there in record time – the first in North Macedonia. The construction work was completed on 20 February 2014 with the assembly and installation of the turbines.

The following actions were funded by KfW:

- Installation of 16 wind turbines with a combined capacity of 36.8 MW.
- Setting up the necessary infrastructure to connect the wind farm (construction of a 5.5 km long 110 kV transmission line, a substation and access roads).

At the end of 2018, the loan agreement for the expansion of the wind farm by 13.2 MW to a total of 50 MW was signed. We currently expect this second phase of the project to be completed by the end of 2021.

On behalf of the German Federal Government, KfW made an amount of EUR 48 million available for the first phase – about 80% of the total costs. EUR 18 million will be made available for the second phase.

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<th>Project name</th>
<th>Wind farm Bogdanci</th>
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<tr>
<td>Commissioned by</td>
<td>Federal Ministry for Economic Cooperation and Development</td>
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<tr>
<td>Country/Region</td>
<td>North Macedonia</td>
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<td>Lead executing agency</td>
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The Bogdanci wind farm reaches has an annual production of about 110 GWh. This means that 25,000 households or a larger North Macedonian city can be supplied with electrical energy.

**Impact**

The new wind farm increases the amount of renewable energy used for power generation in North Macedonia and thereby contributes to the reduction in climate-impacting CO2 emissions. In addition to this, it assists in diversifying North Macedonia’s energy sources. This project shows that environment and climate friendly wind power is a realistic option for North Macedonia and that all logistical and legal challenges related to this renewable energy form can be resolved. The hope is that further wind power plants will be built following the example of Bogdanci and will perhaps even be financed by private investors.