

Turkey: Yundtag windpark

Sustainable electricity from the hills at the Aegean coast.



Certification:
Gold Standard

Key Facts



The Project

Wind power in Turkey is a success story. In 2006, the total installed capacity in the whole of Turkey was less than for this single project. In addition to a lack of local expertise in wind power technology, all major components had to be imported. This exposed the investment to significant exchange rate fluctuations. Consequentially, local banks were not willing to provide debt financing without further collateral. Stable and secure revenues from carbon finance helped to close this gap to the benefit of this project, and many other projects across Turkey. Supported by carbon finance, Turkey is set to become a global player in wind power production.

With strong and steady winds, the coastal area of western Turkey is ideally suited to benefit from a truly clean and inexhaustible energy source. Yundtag wind farm is located roughly 60 kilometers north of Izmir. The turbines built here make full use of stronger winds in higher altitudes: the wind turbine is mounted 80 meters above the ground with rotors spanning 90 meters. The maximum power output of each turbine is 2.5 MW. The installations feed almost 160,850,000 kilowatt hours of electricity into the regional grid annually.

Location:

Province Izmir, Turkey

Project type:

Renewable Energy – Wind

Total emission reductions:

»» 115,000t CO₂e p.a. ««

Project standard:

Gold Standard

Project start date:

November 2007

Sustainable Development

By supporting this project you'll contribute to the following SDGs:



Decent work and economic growth: During the construction of the wind park, 44 jobs were created; 12 of which are permanent positions in operation and maintenance of the wind turbines. Employees continuously receive training improving the base of qualified personnel in Turkey.



Industry, innovation and infrastructure: The project helps to improve the regional and national energy supply and to reduce Turkey's dependency on fossil fuels. Furthermore, it improves the local infrastructure – especially the road conditions.



Life on land: Generating sustainable electricity indirectly avoids, for example, emissions of nitrogen, soot and sulphur dioxide.



**SUSTAINABLE
DEVELOPMENT
GOALS**

While focusing on reducing greenhouse gas emissions, all our projects also generate multiple co-benefits. These are supportive of the United Nations Sustainable Development Goals.



Technology brief – how it works

Driven by the kinetic energy of moving air, the mechanical energy created by a rotor is fed into an attached generator to produce electricity. Output can vary depending on wind speed and this is ultimately determined by atmospheric conditions, although it is also influenced by ground characteristics. A rough surface exerts significant friction, effectively consuming energy and thereby slowing down the moving air. Smooth surfaces cause very little friction, the most obvious example being higher wind speeds in coastal areas.

It is therefore important to site wind farms carefully to maximise their potential. Over the last two decades wind power technology has rapidly improved. The size and power output have consistently increased while lowering the cost per electricity unit. Constructions with a maximum power output of three megawatts are now considered standard technology.



Project Standard



The Gold Standard is an award winning certification standard for results based project finance and is recognised internationally as the benchmark for quality and rigour in certifying environmental and socio-economic project outputs. Established in 2003 by the World Wide Fund For Nature (WWF), the Gold Standard today is trusted and endorsed by NGOs, governments and multinationals including United Nations agencies worldwide.

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