firstclimate
Green Energy, Climate Neutral, Water

Dedicated, Naturally.

India:
88.8MW Wind Power Project

Wind farm in Gujarat annually produces 175GWh of clean electricity

Certification:
Gold Standard
United Nations Framework Convention on Climate Change

Key Facts

TÜV NORD CERT GmbH
Verified Carbon Offsetting

Location:
Gujarat, India

Project type:
Renewable Energy – Wind

Total emission reductions:
» 164,400t CO_2 e p.a. «

Project standard:
Gold Standard; CDM

Project start date:
January 2007

Background

India currently has the seventh biggest economy in the world and neither economic nor population growth show any signs of slowing. This rapid growth, however, has brought major challenges to the country. For example, energy demand in India has more than doubled since 2000. Fossil fuels - and coal in particular - have been the main resource for covering this demand.

As a result, India's energy mix is not only very carbon intensive, but also produces many other pollutants. Greenhouse gas emissions from fossil fuel consumption in the country have increased by 900% over the last 40 years. According to the World Health Organization, 11 out of the 20 most polluted cities in the world can be found in India. Harnessing renewable resources would make an important contribution to reducing India's pollution, and the country holds great potential for the utilization of renewables.

The Project

Located in Gujarat, the 88.8MW wind farm stretches across the villages of Methan, Dhun Dhoraji, Sadodar, Laloi, Narmana, Haripar mevasa, Bagadhara and Jamwadhi in the district of Jamnagar. It is constructed to deliver renewable power to the Indian power grid. A total of 111 turbines are installed, each with an individual capacity of 800kW. In total, the wind farm generates around 175.5GWh of clean electricity every year. Based on average per capita consumption in India, this project produces enough power to sustainably meet the electricity demands of over 219,000 people every year.

Sustainable Development

By supporting this project you'll contribute to the following Sustainable Development Goals:

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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.

Good health and well-being

It is estimated that life expectancy in India is shortened by 23 months purely as a result of poor air quality. The project reduces the carbon intensity of India's power generation and lessens the reliance on fossil fuels to support economic development. As a result, local air quality will be improved.

Affordable and clean energy

Wind energy is a zero-emissions source of power. By increasing the share of wind power within India's energy mix, not only is the carbon intensity of the electricity grid lowered, the gap between demand and supply is also reduced. Consequently, the reliability of power supply in India is generally improved.

Decent work and economic growth

The project creates new employment opportunities in the area and enables sustainable economic development. Local businesses benefit from better power supply and therefore better working conditions.

Industry, innovation and infrastructure

Through the construction of the wind farm, local infrastructure is also improved. In particular, new access roads are built which improves transport routes.

Climate action

By reducing the reliance on fossil fuels, the project contributes to the reduction of carbon emissions and the fight against climate change. The total emissions reduction for the projects is around 164,400t of carbon equivalent every year.

Life on land

Alongside the reduction of carbon dioxide, the project also avoids other pollution such as sulphur dioxide, nitrogen oxides and particular matter. As a result, the project reduces the causes of acid rain, which is a widespread problem across India.

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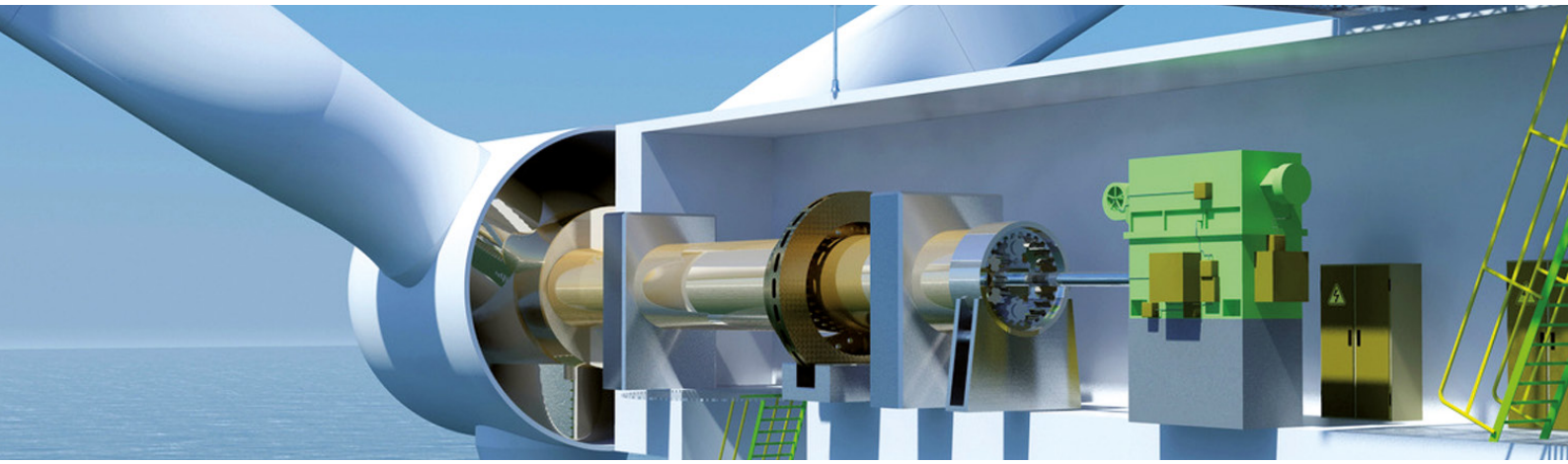

Technology brief – how it works

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.

Project Standard

Gold Standard
Climate Security & Sustainable Development

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.

United Nations
Framework Convention on
Climate Change

The CDM is one of the three Flexible Mechanisms defined in the Kyoto Protocol and allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO_2. These CERs can be traded and sold, and used by industrialized countries to a meet a part of their emission reduction targets under the Kyoto Protocol.

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For more information on other projects in our portfolio please visit our website:

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