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Green Energy, Climate Neutral, Water

Dedicated, Naturally.

India:
Large scale wind project

100 wind turbines for clean electricity generation in Tamil Nadu

Certification:

Gold Standard

United Nations Framework Convention on Climate Change

Key Facts

TÜV NORD CERT GmbH – Verified Certificate Management

Location:
Tamil Nadu, India

Project type:
Renewable Energy – Wind

Total emission reductions:
610,000t CO_2 e p.a.

Project standard:
Gold Standard & CDM

Project start date:
November 2017

Background

India has developed rapidly in recent year. Now home to 18% of the world's population, the consumption of energy has doubled since the turn of the millennium. Despite this increase, there are still an estimated 240 million Indian's left without access to electricity. The IEA predicts energy demand to increase by 5% every year until 2040, accounting for 25% of the global rise in energy demand within the same period. Most of this energy demand is currently met with fossil fuels. The country relies most heavily on coal, of which it consumed 571 billion tonnes in 2013 alone. Fossil fuel generation is one of the biggest sources of outdoor air pollution in the country. In 2012, the WHO linked 4 out of 5 of the main causes of death in India to air pollution.

The Indian government has recently pledged to push for renewables as a new source of energy for the country. This is important as rapid urbanisation is putting increasing pressure on an already unreliable and unsustainable power supply.

The Project

This project involves the installation and operation of 100 wind turbines with a capacity of 2 MW each at the village of Poovani in Tamil Nadu. The turbines have a hub height of 106 meters and a rotor diameter of 114 meters. The wind farm has a combined generation capacity of 200 MW.

By harnessing the favourable wind conditions at the southernmost tip of India, the wind farm is expected to produce an annual average of well above 600 GWh of clean electricity. Taking into account the average electricity demand per household of 1.080 KWh (the Indian Centre for Policy Research), the electricity output of the wind farm is sufficient to supply 590.000 homes in India with clean electricity.

Sustainable Development

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

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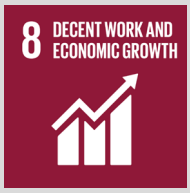
SUSTAINABLE DEVELOPMENT GOALS

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.

Affordable and clean energy

Wind turbines generate zero carbon emissions, making them a clean source of energy. Furthermore, reducing pressure on the regional grid will help improve supply.



Decent work and economic growth

The construction and maintenance of the project will generate employment for about 30 persons. Through trainings and workshops, employees will acquire new skills and further qualifications.

Industry, innovation and infrastructure

The introduction of a new wind farm will bring modern technology into the area. This will improve power lines and transmission; the Indian government recorded a 23% loss in all generated electricity during transmission in 2013.

Climate action

By reducing carbon emissions, the project contributes to climate change mitigation. The emission reductions of this project amount to 610,000t CO_2e per annum.

Life on land

Apart from reducing greenhouse gas emissions, the project also helps to avoid the combustion of fossil fuels, thereby contributing to reduced emissions of air pollutants and soot.

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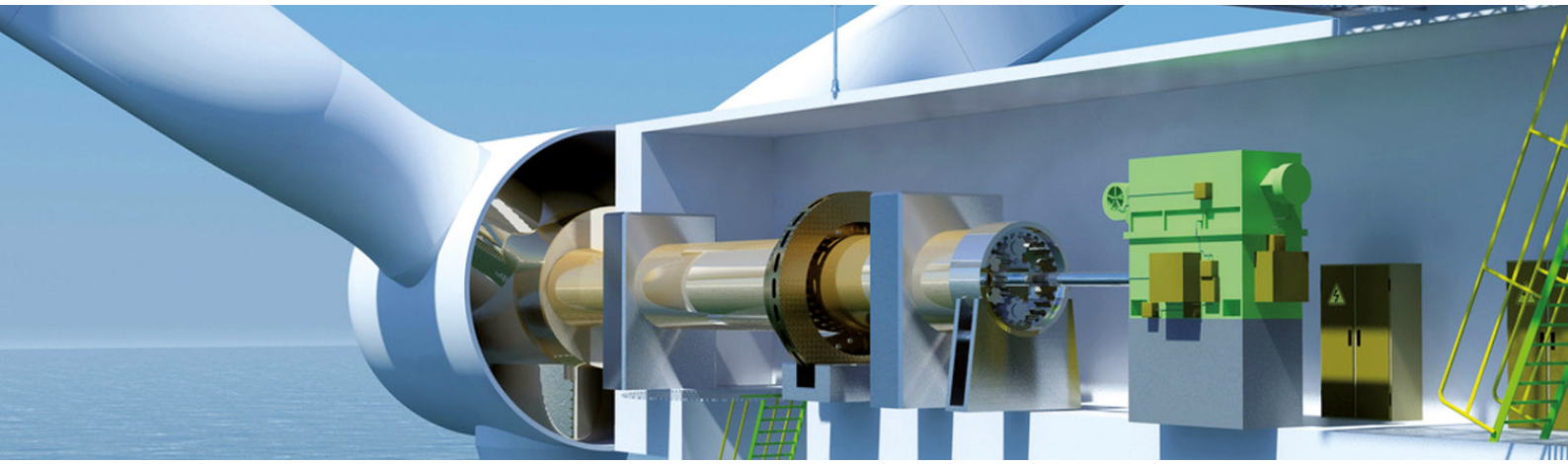

Technology brief – how it works

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. 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

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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