

India: Electricity from solar power

500 MW solar farm generates clean Energy in Andhra Pradesh



Certification:
Verified Carbon Standard
A Verra Standard

Key facts



background

India is now home to almost 18% of the world's population and energy consumption has doubled in recent years. With the booming economy and growing population, India's energy needs will continue to rise. The IEA expects energy demand in India to grow by 5% annually until 2040, about 25% of the global increase. Despite the increase, it is estimated that 240 million Indians, especially in rural areas, still have no or unreliable access to electricity. To date, India has met its increasing demand primarily through the use of fossil fuels - particularly coal, which is particularly emissions-intensive.

The consequences of climate change are also clearly noticeable in India; Extreme weather events and natural disasters are increasing. The Indian government recognizes that clean energy is crucial in the fight against poverty and climate change. It therefore aims to generate around 40% of its cumulative electricity generation capacity from renewable energy sources by 2030.



The project

This large-scale solar project involves the construction and operation of a 500 MW solar park in the Indian state of Andhra Pradesh. In the first ten years, the project is estimated to avoid 996,000 tons of CO2 per year. It therefore replaces 1,051,200 MWh/year of electricity from the energy mix that is mainly based on fossil power plants. Additionally, it helps to diversify the Indian power grid and stabilize supplies.

Location:

Andhra Pradesh, India

Project type:

Renewable energy – solar

Emission reduction:

>> 996,000t CO2 e pa <<

Project standard:

Verified Carbon Standard (VCS)

Project start:

March 2017

Sustainable development

By supporting this project you contribute to achieving the following Sustainable Development Goals at:



SUSTAINABLE DEVELOPMENT GOALS

In addition to reducing CO2 emissions, all of our climate protection projects generate a variety of additional benefits for people and the environment.

Our projects thus enable your commitment to the UN's Sustainable Development Goals.



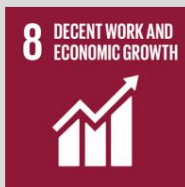
Good health and well-being

Solar energy is displacing energy production from fossil power plants. This will significantly reduce pollution and communities in Andhra Pradesh will benefit from better air quality.



Affordable and clean energy

Solar energy is a clean energy resource that produces no carbon emissions. In addition, the electricity generated by the solar panels will reduce pressure on the regional grid and contribute to better electricity supply.



Decent work and economic growth

The construction and maintenance of the solar systems will create both permanent and temporary jobs. The income of many Indians is largely based on agriculture. The project creates alternative employment opportunities and will stimulate the local economy.



Industry, innovation and infrastructure

The project will invest in modern technology to improve electricity generation and supply. The project demonstrates the success of solar projects in the region, which in turn may encourage further investment in solar projects.



Climate action

Solar energy is one of the cleanest renewable energy sources. It does not release any greenhouse gas emissions. In the case of this project, around 996,000 tonnes of carbon will be reduced per year.



The technology – photovoltaics in brief

Photovoltaics refers to the direct conversion of sunlight into electrical energy. The photoelectric effect is based on the properties of some materials, such as silicon, in which a direct current flows when exposed to sunlight. The closer the location is to the equator, the higher the efficiency of solar technology systems, as the angle of incidence of the light rays is steeper. In India, the southern regions, which also include Andhra Pradesh, are preferred project locations.

Individual solar cells are connected together to form a module, and a large number of modules in turn to form a power plant. In order to be able to feed the electricity from photovoltaic systems into the grid, it must first be converted into alternating current using inverters. The particular strengths of the technology are the simple technical implementation and the low maintenance requirements.



Project standard



The Verified Carbon Standard (VCS) is a global standard for validating and verifying voluntary emissions reductions. Emission reductions from projects validated and verified according to VCS must be real, measurable, permanent, additional, verified by independent third parties, unique, transparent and conservatively calculated. Measured in CO₂ reduction volumes, the VCS is the most important standard for voluntary offsetting of CO₂ emissions.

First Climate Markets AG
Industriestr. 10
61118 Bad Vilbel - Frankfurt/Main
Tel: +49 6101 556 58 20
Email: cn@firstclimate.com

More information about our
Projects as well as pictures and
videos can be found on our website at:

www.firstclimate.com