

Mauritius: Pioneering Solar PV Plant

Increasing solar capacity and creating new jobs



Certification:
VCS VERIFIED CARBON STANDARD

Key Facts



Background

Mauritius is an island nation in the Indian Ocean, about 2,000 kilometres off the southeast coast of Africa. It has no known indigenous oil, natural gas or coal resources; To meet most of its energy needs, the country depends on imported petroleum products and coal. Today, approximately 79 per cent of Mauritius' energy supply is fossil-based, making the country vulnerable to price and currency fluctuations.

Renewable energy accounts for 21% of the Mauritanian energy mix. To increase energy security and to decrease its dependency on fuel imports, however, the Government of Mauritius is committed to gradually shift towards cleaner energy technologies. Since the potential for hydro power and biomass from sugar processing is considered widely exhausted, alternative technologies need to be fostered.

As most of Mauritius receives almost year-round, intensive sunlight, solar photovoltaic energy is a particularly attractive energy option to achieve the national goal of 35% renewable energy by 2030.



The Project

The La Ferme Bambous Solar Power Plant is a 15.2 MW free-standing photovoltaic system and one of the first large scale solar farms on the island. The project activity involves the installation of 60,800 photovoltaic solar panels. The annual production of about 23 GWh of clean electricity is fed into the Mauritian national transmission grid, further displacing fossil fuel based energy

Location:

Eau Bonne, Bambous, Mauritius

Project type:

Renewable energy – solar

Total emission reductions:

»» 22,000t CO₂e p.a. ««

Project standard:

VCS

Project start date:

January 2014

Sustainable Development

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



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

Solar power is an emission-free source of renewable energy. By feeding solar energy into the national grid, the project improves the stability and accessibility of electricity in Eau Bonne. It will also contribute to the diversification of Mauritius' energy mix.



Decent work and economic growth

The project employed around 300 local technicians and local workers during the installation, testing and start-up of the solar plant. Since the commissioning, 20 people have been provided with permanent full-time jobs on-site. All employees are locals from Mauritius.



Industry, innovation and infrastructure

Prior to the project the total installed solar PV capacity in Mauritius amounted to 2.71 MW, which is less than 0.5% of the island's energy mix. The project is a technological breakthrough for Mauritius, increasing the total install capacity of solar by five times.



Climate action

By reducing carbon emissions, the project contributes to climate change mitigation. The emission reductions of this project amount to 22,000t CO₂e per annum.



Life on land

The project improves local air and water quality by reducing other pollutants such as sulphur dioxide, nitrogen oxides, soot and particles associated with the burning of fossil fuels.



Technology brief – how it works

Photovoltaics involve the conversion of sunlight into electricity using the photoelectric effect. This effect is based on the characteristic of some materials, like silicon, that create a direct current when absorbing energy from sunlight. The energy received for a given area is generally higher the closer a location is to the equator, as the incidence angle of sunlight is steeper. However, cloud coverage does have a great effect on actual electricity yields. The highest solar yields therefore can be achieved in regions with little cloud cover like the Arabian Peninsula, Australia and Africa.

Solar cells are bundled together in large numbers inside modules, which are wired together generating direct current. To make this suitable for commercial electricity grids, the current is usually converted into alternating current through the use of inverters. Prices for solar modules have fallen rapidly with large-scale production and applications. In sunny places solar power can compete with conventional power plants without additional support.



Project Standard



The Verified Carbon Standard (VCS) is a global standard for the validation and verification of voluntary carbon emission reductions. Emissions reductions from VCS projects have to be real, measurable, permanent, additional, unique, transparent, and third-party verified. Assessed against the background of the total volume of emission reductions, VCS is the globally leading standard for voluntary carbon offsets.

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