

INDIA OPENED WORLD'S FIRST AIRPORT OPERATING FULLY ON SOLAR POWER



The Cochin International Airport Limited (CIAL) has become the first airport in the world to be operated fully on solar power. The airport, located in the southern Indian state of Kerala, has set up a 12 MWp solar power generation facility comprising of 46,150 solar panels spread across 45 acres beside the cargo complex.

Mr. Oommen Chandy, chief minister of Kerala, inaugurated the solar power plant on 18 August 2015. The installation of the solar power unit will ensure a total energy availability of 50,000 to 60,000 units per day which would be enough for the airport to carry out all of the operational functions. **This enables the airport to become absolutely power neutral.**

CIAL's foray into tapping solar power started with the installation of the 100 KWp pilot solar power generation unit on the Arrival Terminal Block's roof top in March 2013, setting the trend for implementation of grid-connected solar PV units in Kerala. The installation of this unit was executed by Vikram Solar Pvt. Ltd., a Kolkata based company.

The pilot plant consisted of 400 polycrystalline modules, each capable of generating 250Wp, and five 20kW capacity string inverters made by Refu-sol. The grid connected system did not have any battery storage provision.

Following the successful implementation of the pilot plant, a 1 MWp solar power plant was installed by CIAL with one part on top of the roof and the other on the ground within the premises in the Aircraft Maintenance Hangar facility.

The 1MWp solar PV unit, set up by Emvee Photovoltaic Power Pvt. Ltd., consisted of 4000 monocrystalline modules with a capacity of 250Wp each. The solar power plant also comprised of 33 string inverters made by Delta having a capacity of 30kW each, making it the first MW scale installation in Kerala.

Both the pilot plant and 1MWp plant were equipped with SCADA system for remote monitoring. Further, the implementation of these solar plants has helped CIAL save over 550MT in terms of CO2 emission and minimize environmental degradation to that extent.

Following the successful implementation of solar PV plants in CIAL, the Indian government has directed airports across the country to incorporate solar energy into their day-to-day operations.

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