

UN spotlight on Kerala's energy-positive campus

Author - T. Nandakumar, Published on - 16.3.2018



Globally cool:The campus uses daylighting controls, CFC-free heating, ventilation and cooling systems.Special Arrangement Energy Management Centre is the only Indian project to get recognition for energy efficiency

The Energy Management Centre (EMC), an autonomous institution under the Kerala government, has grabbed the global spotlight for its energy-positive campus, located at Sreekaryam in the State capital. The 'Global Status Report 2017: Towards a zero-emission, efficient, and resilient buildings and construction sector,' published by the United Nations Environment Programme (UNEP), has listed the EMC campus as one of the recent achievements in the deployment of key technologies for energy-efficiency in buildings. The 40,000-square foot building is the only one from India to figure in the list, along with five other projects worldwide. According to the report, the EMC's energy-positive campus was designed to allow natural cross-flow ventilation from building forms and openings. The campus is equipped with a 30-kilowatt grid-connected solar capacity that exports around 50 kWh a day on an average, with a doubling of the capacity under implementation. **All-green design** The EMC campus uses daylighting controls, CFC-free heating, ventilation and cooling systems, along with a halogen-free fire-fighting system. Solar reflectance index coating, combined with high-albedo painting and turbo-vents for passive cooling, has been used, and tropical rainforest trees help create cool surroundings. Only certified green construction materials, recycled wood boards, low-emitting paints and adhesives, and green-plus certified carpets have been used. "This is a great achievement that will boost our efforts to promote energy efficiency," said K.M. Dharesan Unnithan, Director, EMC. The other five projects recognised by the UNEP include the Sierra Crest development in Fontana, California, the Association of Nubian Vaults in Sub-Saharan Africa, a construction and demolition waste recycling project in Paris, the Palm Tree eco-development project in Hanoi, Vietnam, and the Higashi-Matsushima Smart ecotown in northern Japan. Building-related carbon emissions have been rising by around 1% per year since 2010, and more than four million deaths are attributable to illness from household air pollution. Built with assistance from the Global Environment Fund, the EMC campus is the only LEED Gold certified building in the government sector in Kerala. Up to 94% of the built-up space is daylight illuminated.

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