

Skyscraper solar glass





Overview

Can a skyscraper turn sunlight into electricity?

Researchers have set a new efficiency world record for converting sunlight into electricity using transparent solar cells. The breakthrough, made by an international team from the CitySolar project, is a huge boost for renewable energy, allowing entire skyscrapers to serve as power stations by transforming their windows into solar panels.

Are there any skyscrapers with solar windows?

Windows pose a greater challenge than rooftops or walls because of the need to actually see through them. So far, very few examples of skyscrapers with solar windows exist. The highest profile site is the Willis Tower (formerly Sears Tower) in Chicago, where Pythagoras Solar installed a small prototype in 2011.

Are glassy skyscrapers a problem?

RICHARD LUNT/MICHIGAN STATE UNIVERSITY Lance Wheeler looks at glassy skyscrapers and sees untapped potential. Houses and office buildings, he says, account for 75% of electricity use in the United States, and 40% of its energy use overall. Windows, because they leak energy, are a big part of the problem.

How do solar windows work?

The re-emitted light is concentrated and shunted sideways, through the glass, to solar cell strips embedded in the window frame. Because quantum dots are cheap to make and only a small amount of solar cell material is needed to capture the re-emitted light, these solar windows promise to be inexpensive.



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